

**SAMSUNG**

## **CASSETTE TYPE AIR CONDITIONER**

### **INDOOR UNIT**

**CH070EZM**

**CH105EZM**

**CH128EZM**

**CH140EZM**

### **OUTDOOR UNIT**

**UH070EZMC**

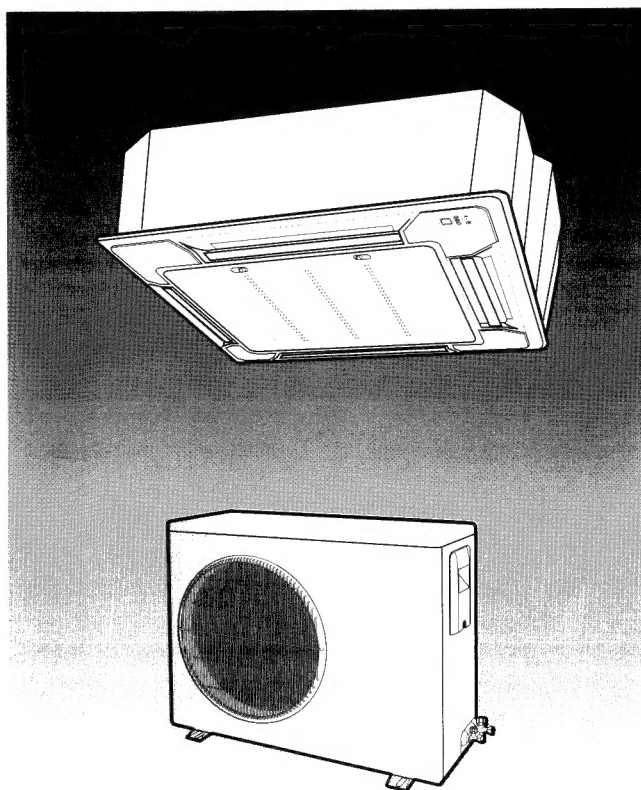
**UH105GZM**

**UH128GZM**

**UH140GZM**

# ***SERVICE* Manual**

## **AIR CONDITIONER**



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- 2. Disassembly and Reassembly**
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- 4. Control specification & Troubleshooting**
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# 1. Product Specifications

1-1 Table

MODEL	INDOOR UNIT			CH070EZM	CH105EZM	CH128EZM	CH140EZM
	OUTDOOR UNIT			UH070EZMC	UH105GZM	UH128GZM	UH140GZM
Capacity	Cooling	W	7,000	10,000	12,800	14,000	
	Heating	W	7,700	11,200	14,000	16,000	
EER	Cooling	W/W	2.84	2.93	3.20	3.20	
	Heating	W/W	3.03	3.10	2.80	2.80	
Indoor Unit	Power Supply			220V~, 50Hz			
	Power Input	Cooling	kW	0.1	0.19	0.20	0.2
		Heating	kW	0.1	0.19	0.20	0.2
	Running Current	Cooling	A	0.45	0.85	1.00	1.0
		Heating	A	0.45	0.85	1.00	1.0
	Fan Speed	Hi	r.p.m	500	560	700	700
		Mid	r.p.m	460	510	630	630
		Low	r.p.m	420	460	560	560
		Ultra Low	r.p.m	270	320	360	360
	Air Circulation	Hi	m³/min	19.7	24.8	32.3	32.3
		Mid	m³/min	18.2	23.3	28.5	28.5
		Low	m³/min	17.0	22.0	25.3	25.3
		Ultra Low	m³/min	11.9	17.0	19.1	19.1
	Noise Level (Sound Pressure)	Hi	dB(A)	40	42	45	45
		Mid	dB(A)	38	40	43	43
		Low	dB(A)	36	38	41	41
		Ultra Low	dB(A)	29	31	31	31
	Heat Exchanger	Type		Slit Fin Coil			
		Row x Stages x Fin Pitch		2 x 9 x 1.4(1,958)		2 x 12 x 1.4(1,958)	
	Fan	Type		Turbo			
		Motor Output	W	23	30	58	58
	Dimensions	H	mm	230	230	288	288
		W	mm	840	840	840	840
		D	mm	840	840	840	840
	Weight	kg	Net / Gross	26 / 31	26 / 31	29.5 / 35.5	29.5 / 35.5
Panel	Dimensions	H	mm	42			
		W	mm	950			
		D	mm	950			
	Weight	kg	Net / Gross	5 / 10			
Outdoor Unit	Power Supply			220V~, 50Hz	3ø, 380V~, 50Hz		
	Power Input	Cooling	kW	2.25	3.11	4.45	4.50
		Heating	kW	2.25	3.66	5.25	5.35

**Table(cont.)**

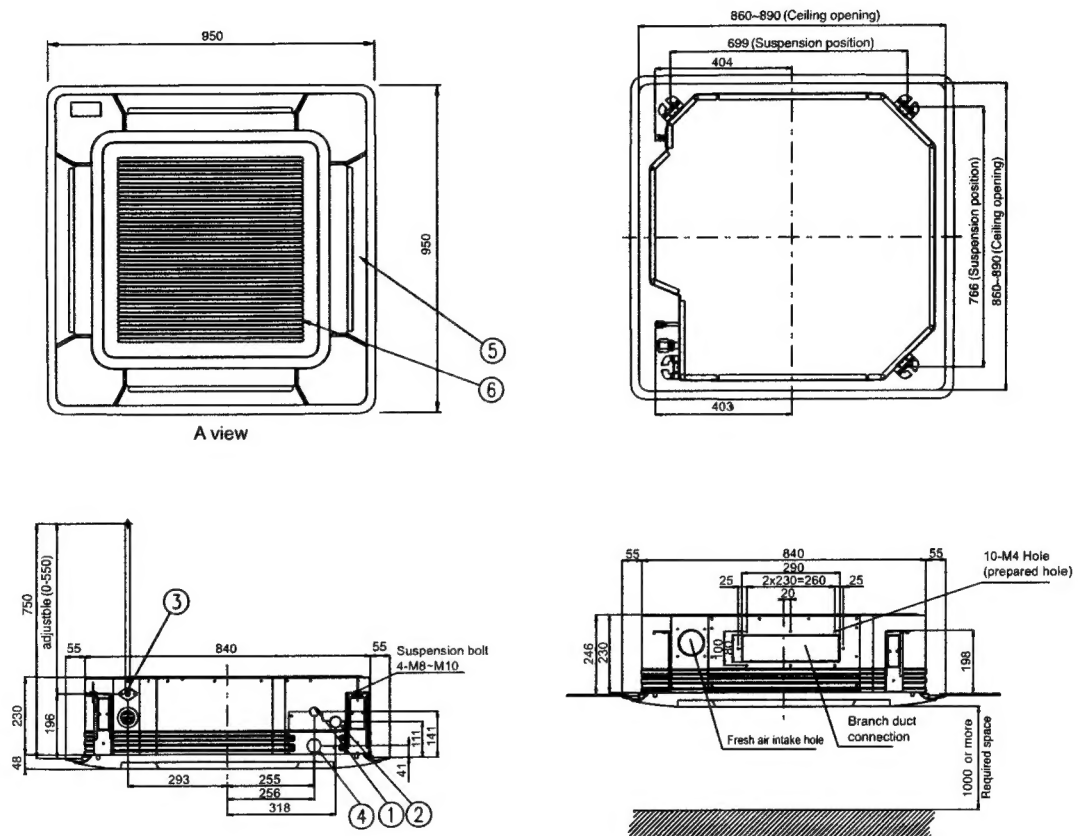
MODEL	INDOOR UNIT			CH070EZM	CH105EZM	CH128EZM	CH140EZM
	OUTDOOR UNIT			UH070EZMC	UH105GZM	UH128GZM	UH140GZM
Outdoor Unit	Running Current	Cooling	A	11.2	5.10	7.90	8.00
		Heating	A	11.2	5.90	9.30	9.50
	Fan Speed	Hi	r.p.m.	820	900	900	900
		Low	r.p.m.	400	500	500	500
	Sound Pressure Level		dB(A)	57	59	63	63
	Fan	Type		Propeller			
		Motor Output	W	60	114	114	114
	Compressor	Type		Rotary	Scroll		
		Model		SHV33YC-G	ZR45KC-TFD	ZR61KC-TFD	ZR61KC-TFD
		Motor Output	kW	2.22	3	4	4
		Protection		Internal			
	Heat Exchanger	Type		Wave fin coil			
		Row x Stages x Fin Pitch		2 x 24 x 1.5(900)	2 x 36 x 1.7(824)	2 x 48 x 1.7(925)	2 x 48 x 1.7(925)
	Refrigerant	Control		EEV			
		(R22)Charge	g	2,100	2,200	4,300	4,300
	Dimensions	(H x W x D)	mm	880x638x310(900)	880x965x320(824)	930x1,270x385(925)	930x1,270x385(925)
	Weight	kg	Net / Gross	67 / 72	80 / 86	130 / 140	130 / 140
Piping	Pipe O.D.	Liquid	mm(inch)	9.52(3/8")	9.52(3/8")	9.52(3/8")	9.52(3/8")
	Size	Gas	mm(inch)	15.88(5/8")	19.05(3/4")	19.05(3/4")	19.05(3/4")
	Connection Method			Flare			
	Between	Height	m	15	30	30	30
		Pipe Length	m	30	50	50	50

## 1-2 Dimension

### 1-2-1 Indoor Unit

#### ■ CH070EZM/CH105EZM

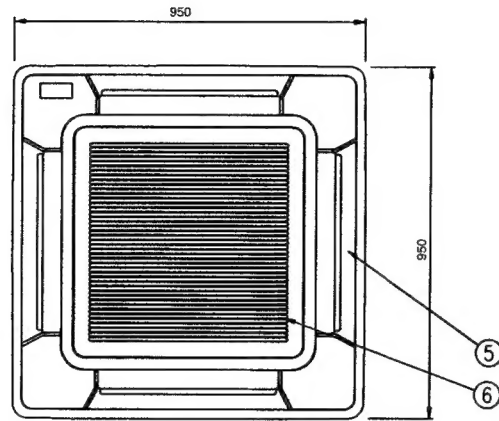
(Unit : mm)



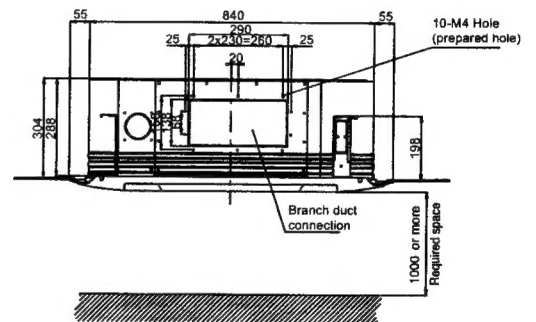
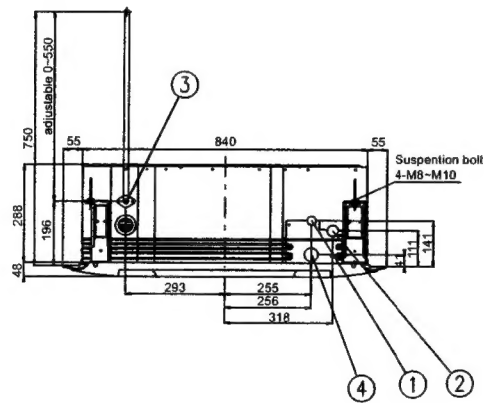
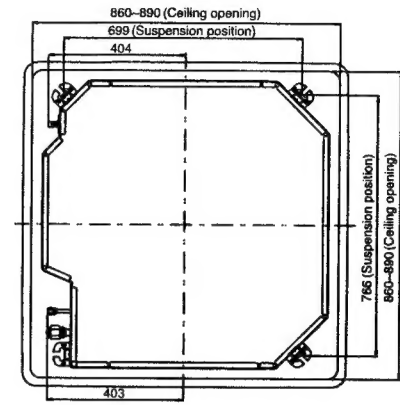
Number	Name	Model	
		CH070EZM	CH105EZM
1	Liquid pipe connection	ø9.52(3/8")	ø9.52(3/8")
2	Gas pipe connection	ø15.88(5/8")	ø19.05(3/4")
3	Drain pipe connection		
4	Power supply connection		
5	Air discharge grille		
6	Air suction grille		

■ CH128EZM/CH140EZM

(Unit : mm)



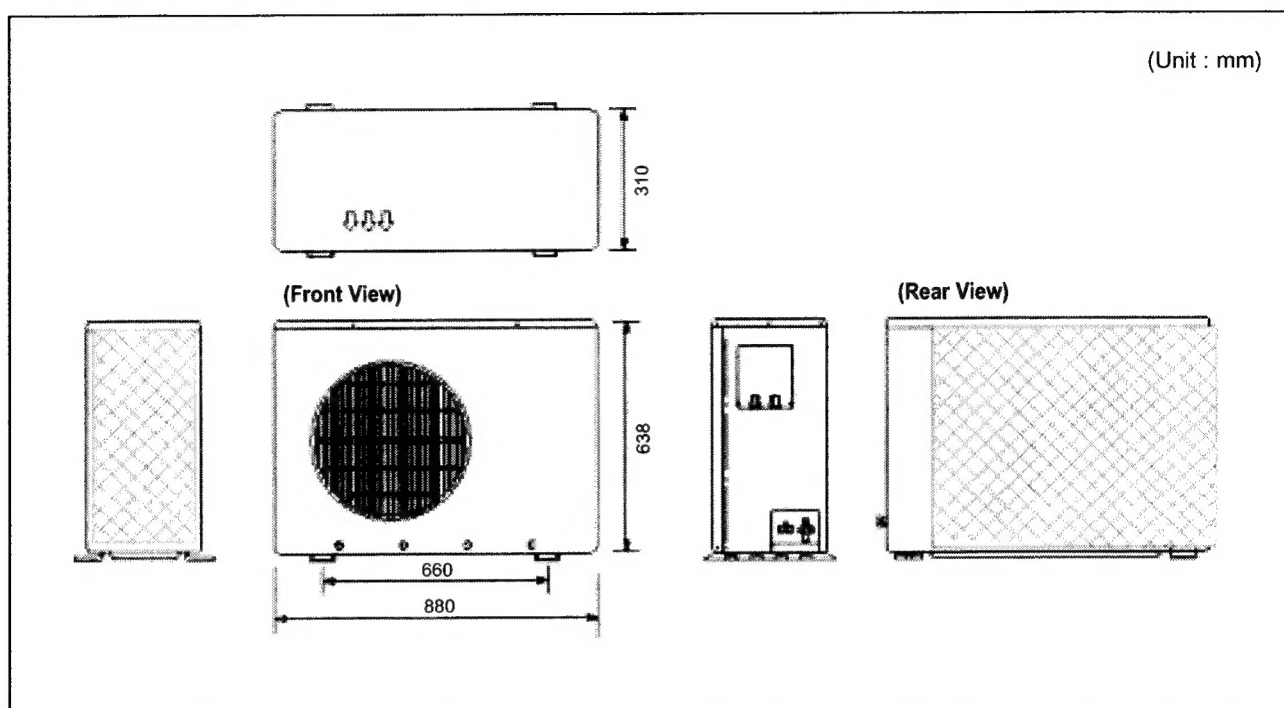
A view



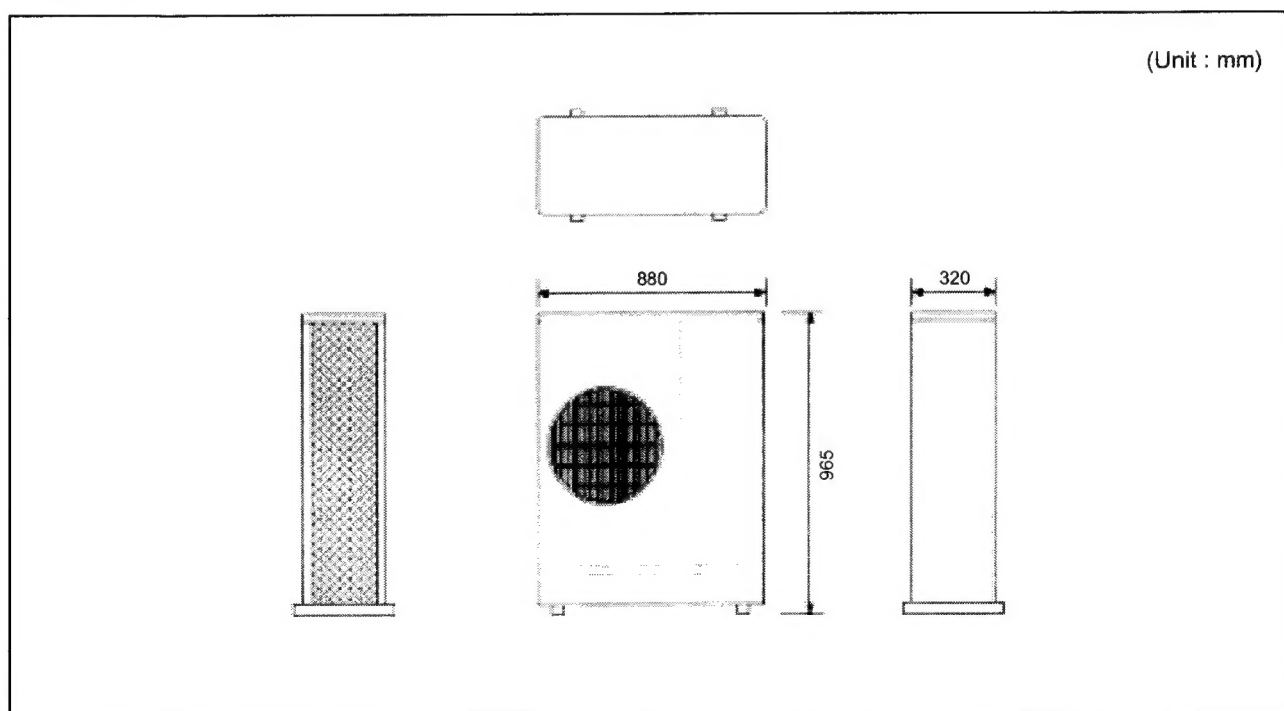
Number	Name	Remark
1	Liquid pipe connection	ø9.52(3/8")
2	Gas pipe connection	ø19.05(3/4")
3	Drain pipe connection	
4	Power supply connection	
5	Air discharge grille	
6	Air suction grille	

## 1-2-2 Outdoor Unit

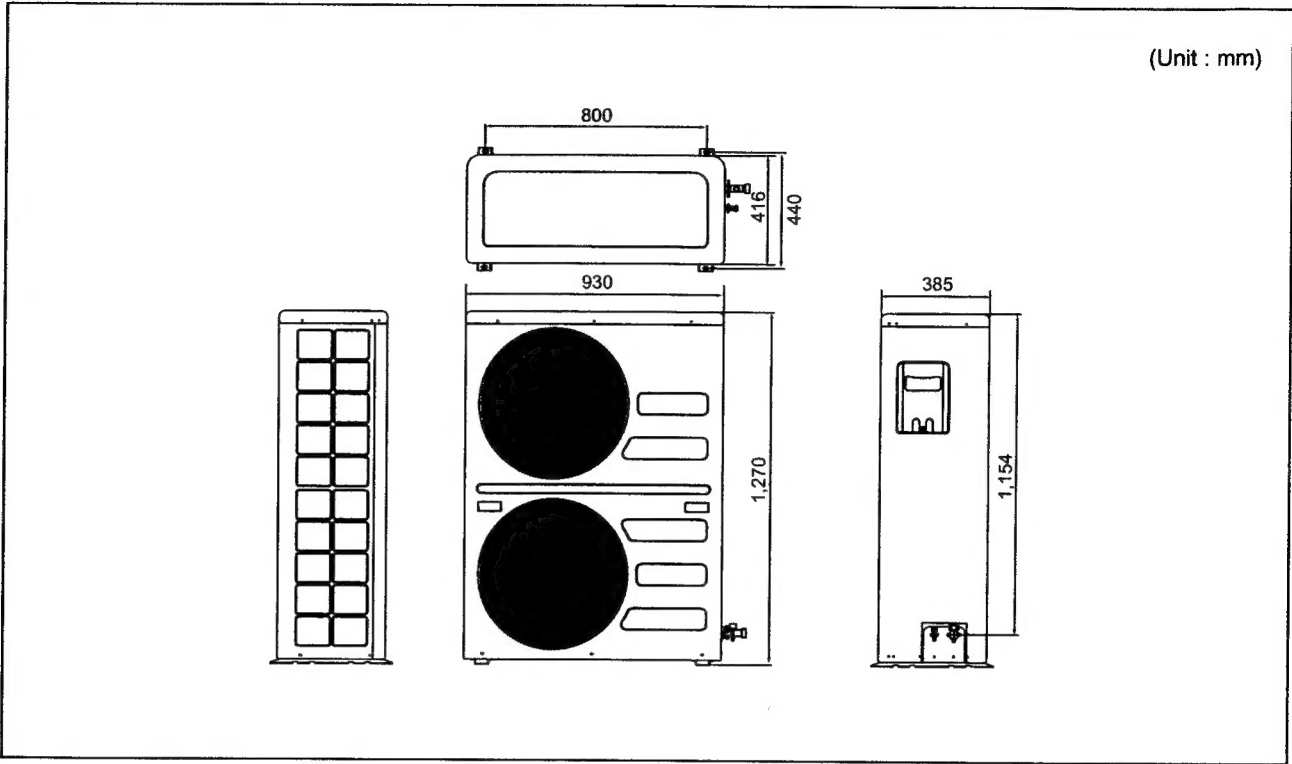
### ■ UH070EZMC



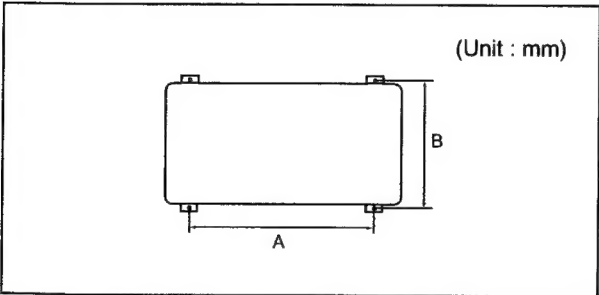
### ■ UH105GZM



■ UH128GZM/UH140GZM



1-2-3 Dimension of fixing input bolt



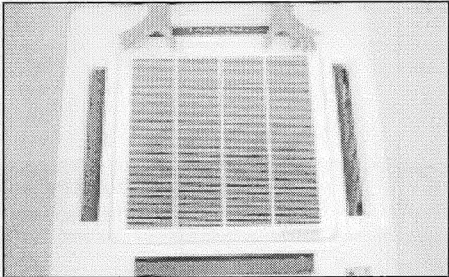
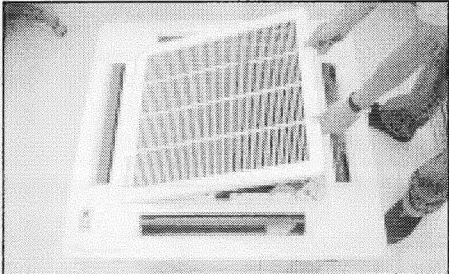
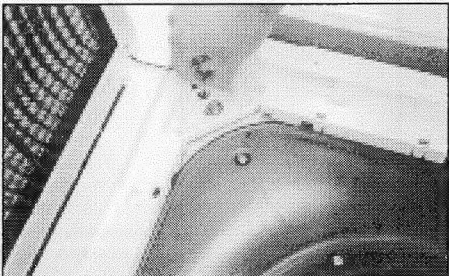
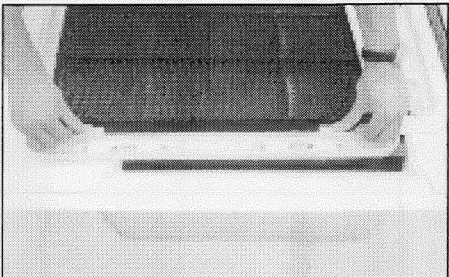
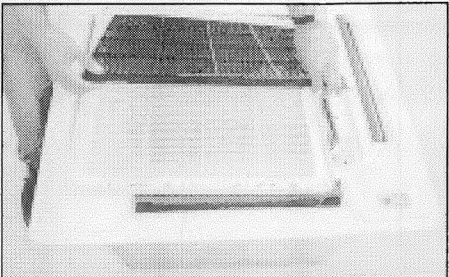
Model	UH070EZMC	UH105GZM	UH128GZM UH140GZM
A	660	660	800
B	330	340	416



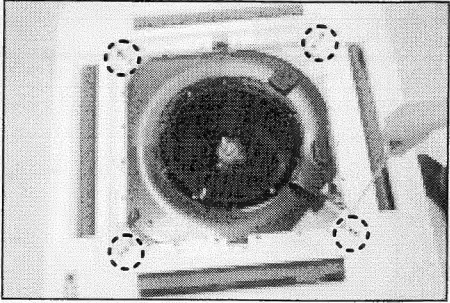
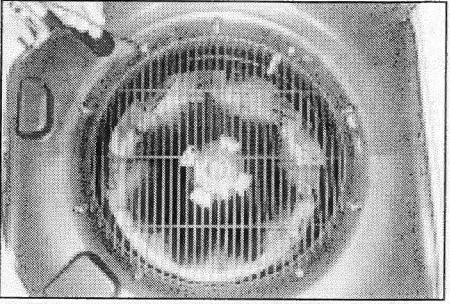
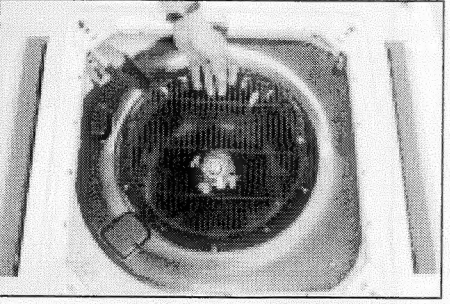
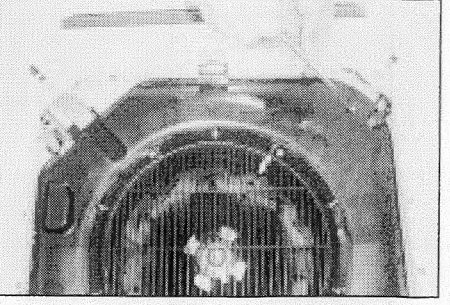

## 2. Disassembly and Reassembly

Stop operation of the air conditioner and remove the power cord before repairing the unit.

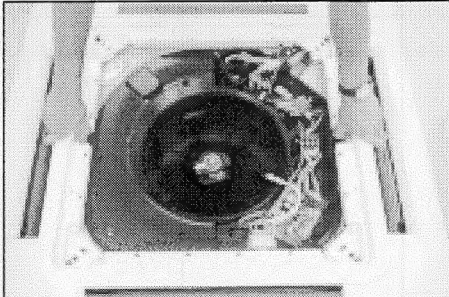
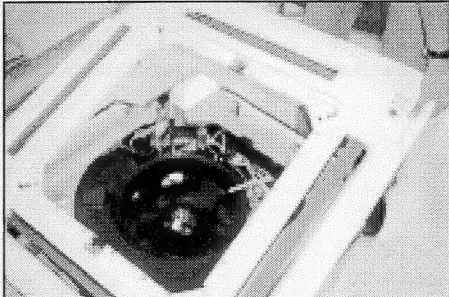
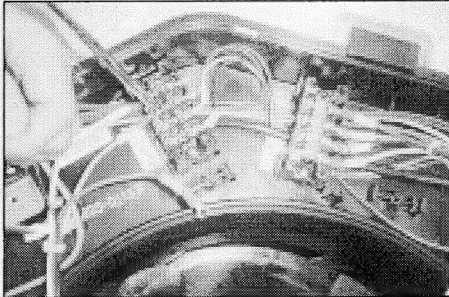
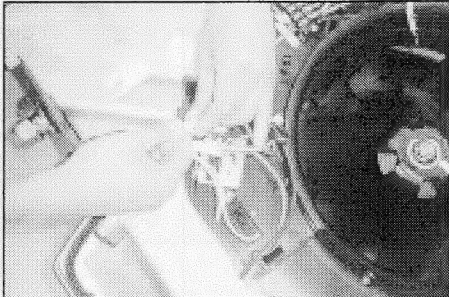
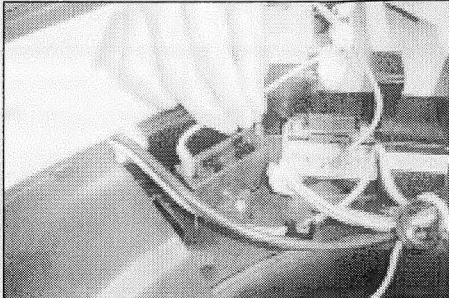
### 2-1 Indoor Unit




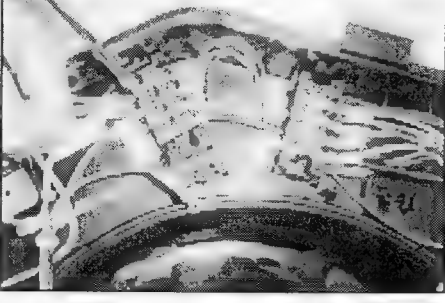
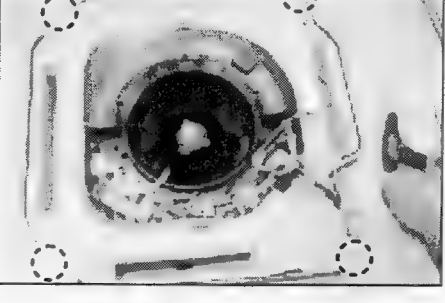
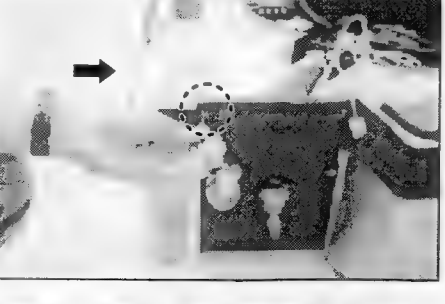

No	Parts	Procedure	Remark
1	Front Grille - Dust-Collecting Filter	<p>1) Push the tap on the front grille to open it.</p> <p>2) Disassembly of Front Grille. (1) Open the front grille at about 45° degrees and draw it forward.</p> <p>(2) Disassemble the safety clip.</p> <p>3) Filter Disassembly (1) Draw the dust-collecting filter forward.</p> <p>(2) Disassemble the filter.</p>	    

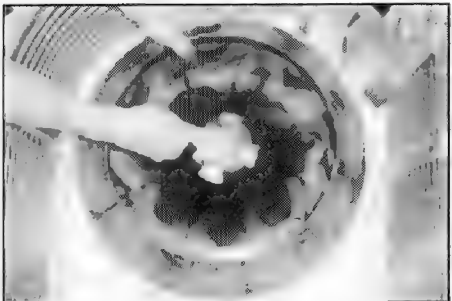

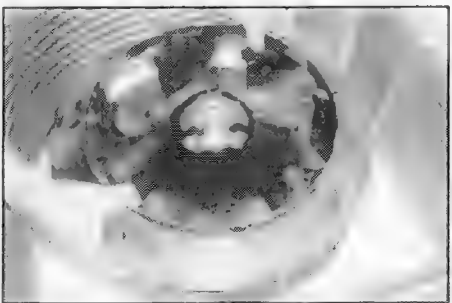
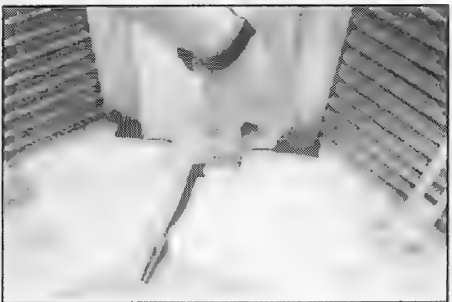
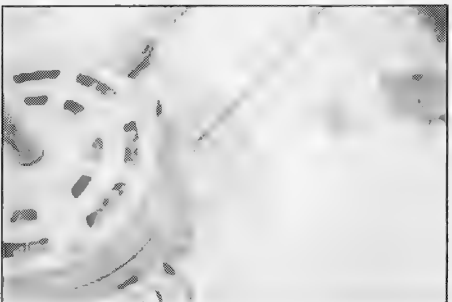


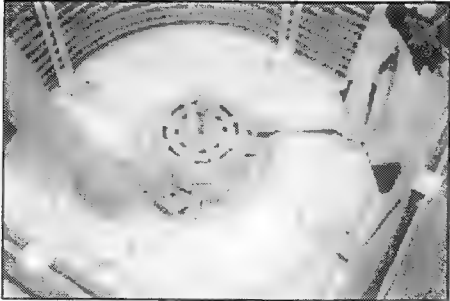

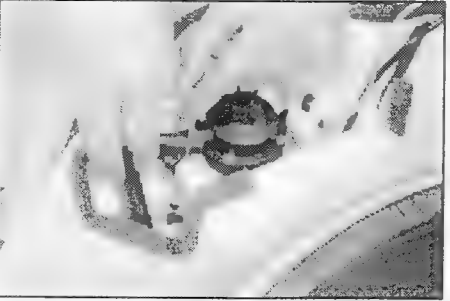

No	Parts	Procedure	Remark
		4) Loosen the 4 bolts slowly.	
		5) Loosen the bolt of the front net to disassemble the safety net.	
			
		6) Loosen the bolt on the electronic part box cover to uncover the electronic part box cover.	
		7) Disassemble the 3 cables between the indoor unit and the panel. - Stepping Motor Connector - Receiving & Display Unit Connector Option	

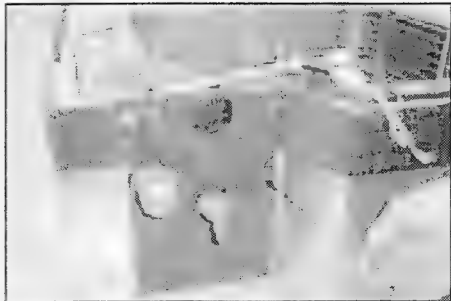
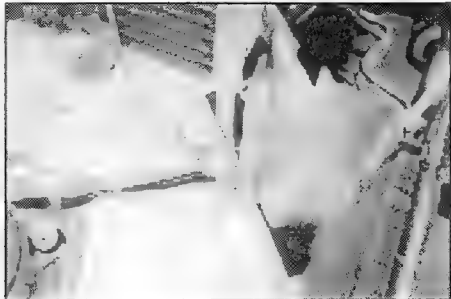
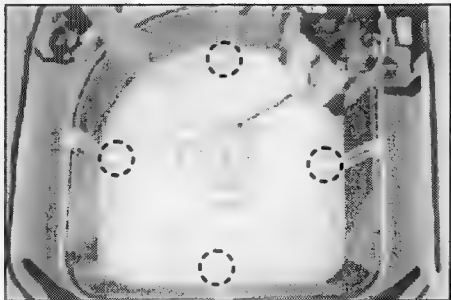




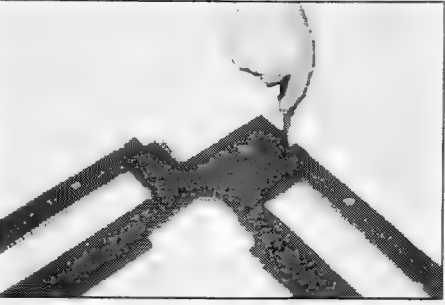

No	Parts	Procedure	Remark
		<p>8) Hold on the two hooks on both sides of the indoor unit and disassemble the front panel.</p> <p>9) Take away the disassembled panel out of the main body.</p>	 
2	Electronic Part - Indoor & Outdoor Connecting Cable	1) Disconnect all the indoor and outdoor cables connected to the terminal board.	
3	Fan & Motor	<p>1) Disassemble the fan motor wire connector, thermistor wire connector, and drain pump wire connector.</p> <p>2) Disassemble the wire connector in the capacitor.</p>	 

No	Parts	Procedure	Remark
		<p>3) Disassemble the ground wire.</p> <p>4) Disassemble the float switch wire connected to the terminal port.(F1, F2)</p> <p>5) Loosen the 8 bolts in the mark .</p> <p>6) Loosen a bolt in the arrow direction and  inside.</p> <p>7) Disassemble the drain cushion from the main body.</p>	    

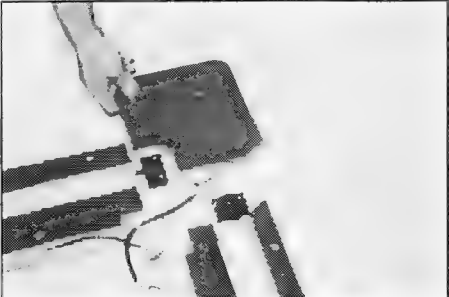
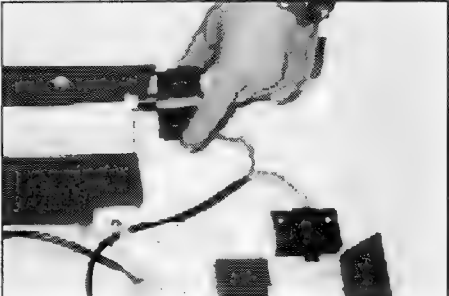
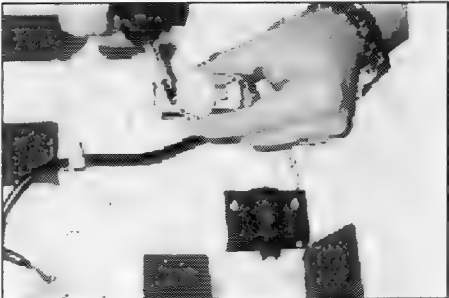
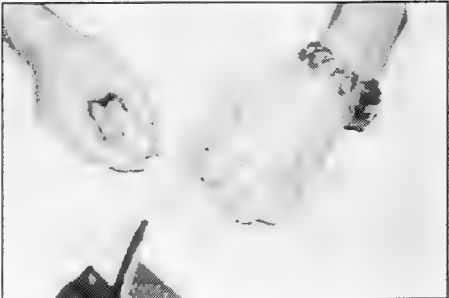
No	Parts	Procedure	Remark
		<p>8) Loosen the nut.</p> <p>9) Lift the fan to disassemble from the motor.</p> <p>10) Disassemble the motor connector wire.</p> <p>11) Disassemble the ground wire.</p>	    

No	Parts	Procedure	Remark
		12) Loosen 3 nuts to disassemble the motor.	
4	Pump	<p>1) Loosen the 4 bolts of the drain pump.</p> <p>2) Disassemble the hose from the drain pump.</p> <p>3) Disassemble the pump from the main body bracket.</p>	  

No	Parts	Procedure	Remark
5	Heat Exchanger	<p>1) Disassemble the cover pipe beside the main body.</p> <p>2) Loosen the 2 bolts fixing the heat exchanger to the indoor unit base.</p> <p>3) Disassemble the 4 fixing brackets of the heat exchanger to disassemble it from the main body.</p>	  

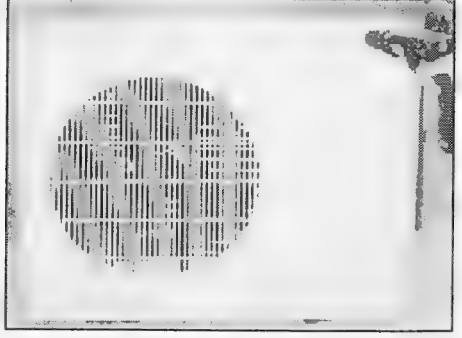

No	Parts	Procedure	Remark
6	Front panel - Cover Front	* Do "1", above. Push 3 cover front fixing screws inside the front panel and snap fixing part to separate the cover front.	   



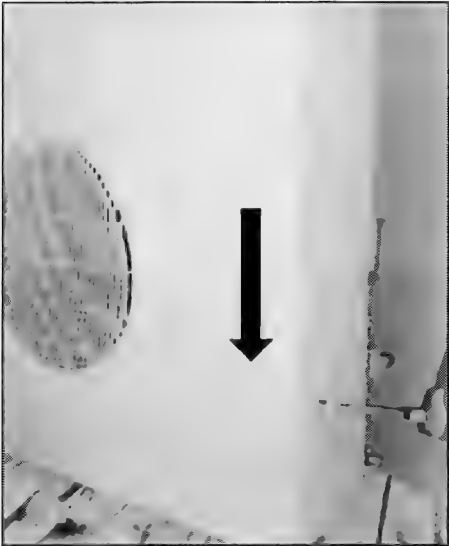
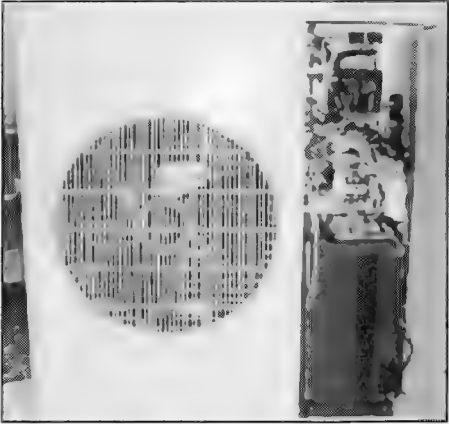
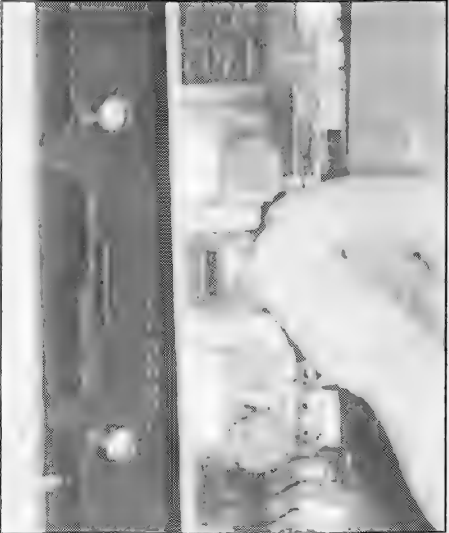
No	Parts	Procedure	Remark
7	Front panel - Stepping Motor	<p>※ Do "1", above.</p> <p>1) Loosen each one of fixing screw at the corner part, (1) cushion side-A and cushion side-B inside the front panel, and then lift it up.</p> <p>2) Remove (1) the screw of housing motor L/R fixed at the corner part of front panel inside and separate (2) Blade-H.</p> <p>3) (1) Separate the stepping motor from the housing motor L/R and (2) separate the motor wire connected.</p>	   

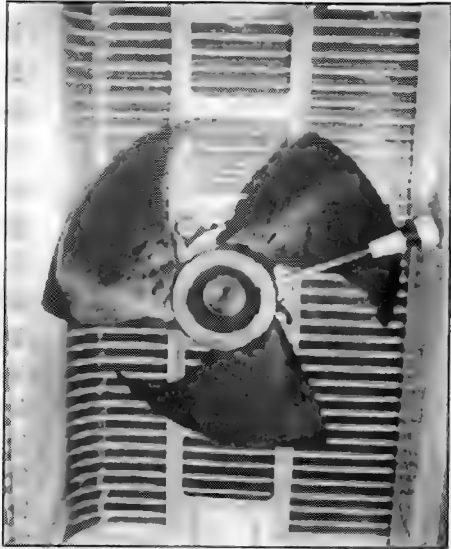
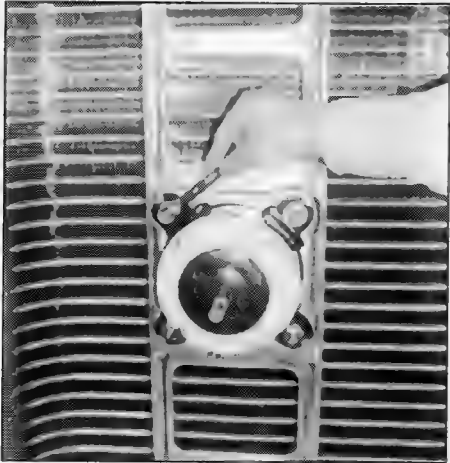
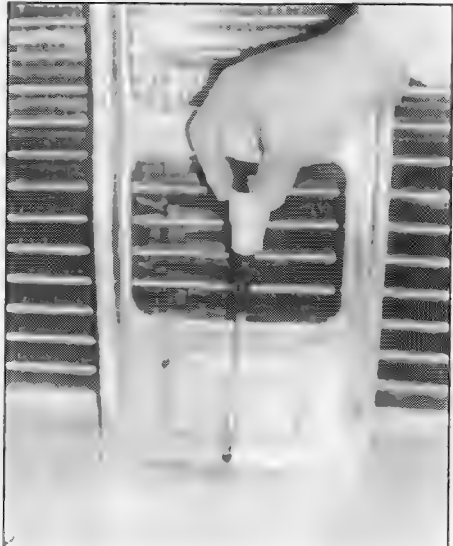
## 2-2 Outdoor Unit

### ■ UH070EZMC

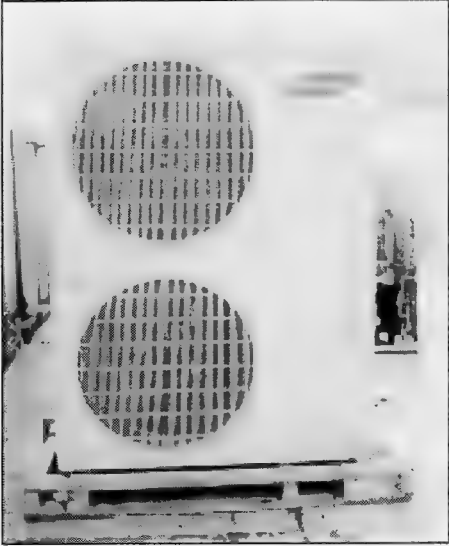
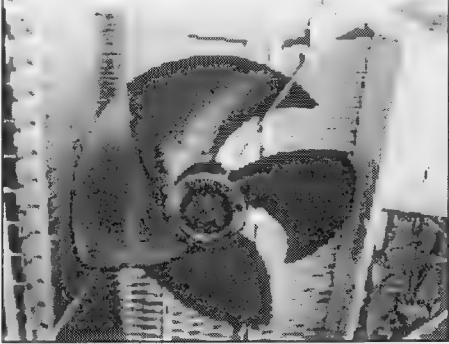
No	Parts	Procedure	Remark
1	Cabinet	<ol style="list-style-type: none"> <li>1) Turn off the unit and remove the power cable.</li> <li>2) Remove the top cover.</li> <li>3) Remove the control box cover.</li> <li>4) Unplug the ass'y cable.</li> <li>5) Remove the cabi-side.</li> <li>6) Remove the cabi-front.</li> </ol> <p>* When you assemble the parts, check if the each parts and electric connectors are fixed firmly.</p>	
2	Fan Motor & Propeller Fan	<ol style="list-style-type: none"> <li>1) Do Procedure "1" above.</li> <li>2) Remove the nut flange. (Turn to the right to remove as it is a left turned screw)</li> <li>3) Disassemble the propeller fan.</li> </ol>	

## ■ UH105GZM

No	Parts	Procedure	Remark
1	Outdoor Unit Disassembly Procedure	<p>1) Loosen the 8 screws fixing the cover side.</p> <p>2) Loosen the screws and push the cover side in the arrow direction for disassembly.</p> <p>3) Disconnect the PCB connector and disassembly the electronic box and PCB.</p>	  

No	Parts	Procedure	Remark
		<p>4) Disassemble the cover top and front.</p> <p>5) Loosen the bolt to disassemble the fan.</p>	
		<p>6) Loosen the motor fixing nut.</p>	
		<p>7) Loosen the bracket fixing screw.</p>	

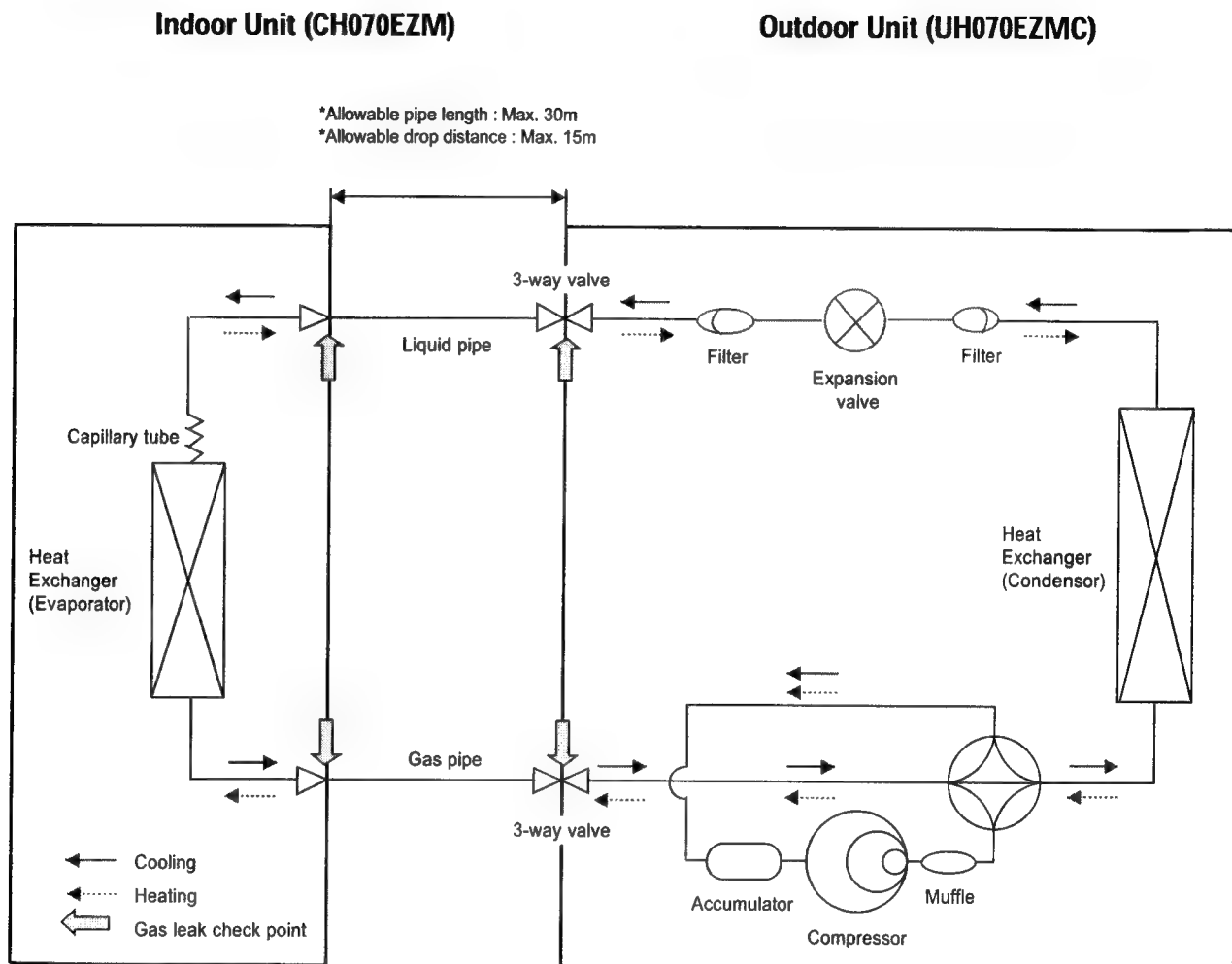
## ■ UH128GZM/UH140GZM

No	Parts	Procedure	Remark
1	Cabinet	<ol style="list-style-type: none"> <li>1) Turn off the equipment and disassemble the power cable.</li> <li>2) Uncover the top cover.</li> <li>3) Uncover the control box cover.</li> <li>4) Pull out the assemble cable.</li> <li>5) Disassemble the cabinet side.</li> <li>6) Disassemble the cabinet front.</li> </ol> <p>* Check if each part is fixed to the electric connector firmly at the time of part assembly.</p>	
2	Fan Motor & Propeller Fan	<ol style="list-style-type: none"> <li>1) Follow the above procedure "1".</li> <li>2) Loosen the propeller fan bolt.</li> <li>3) Disassemble the fan.</li> </ol>	

## 3. Block Diagrams

### 3-1 Refrigerating Cycle Block Diagrams

#### ■ CH070EZM/UH070EZMC

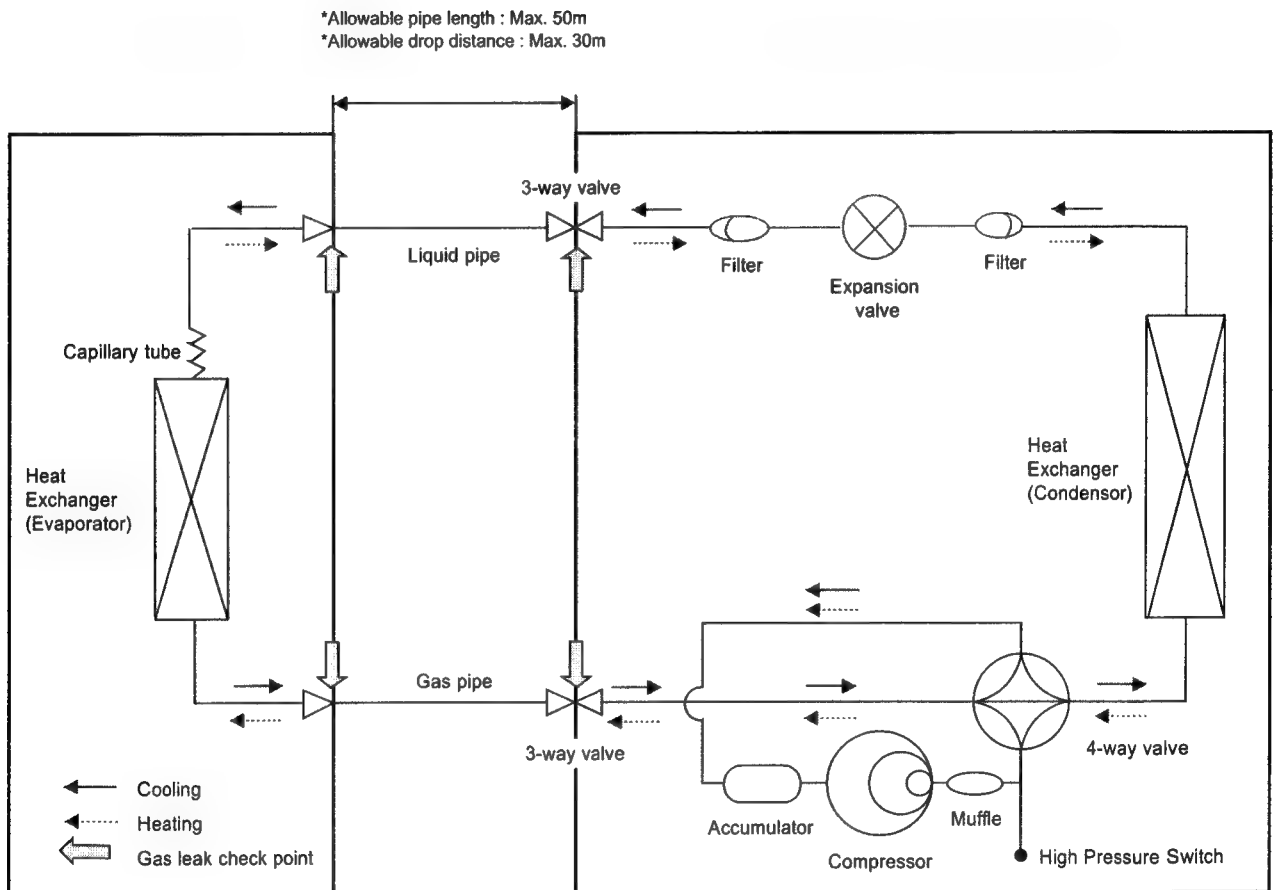


\* Amount of refilling per extension length of 1m; When extending the pipe length by more than 5m, 30gr of R-22; refrigerant should be refilled per extension length of 1m.

# ■ CH105EZM/UH105GZM

## Indoor Unit (CH105EZM)

## Outdoor Unit (UH105GZM)



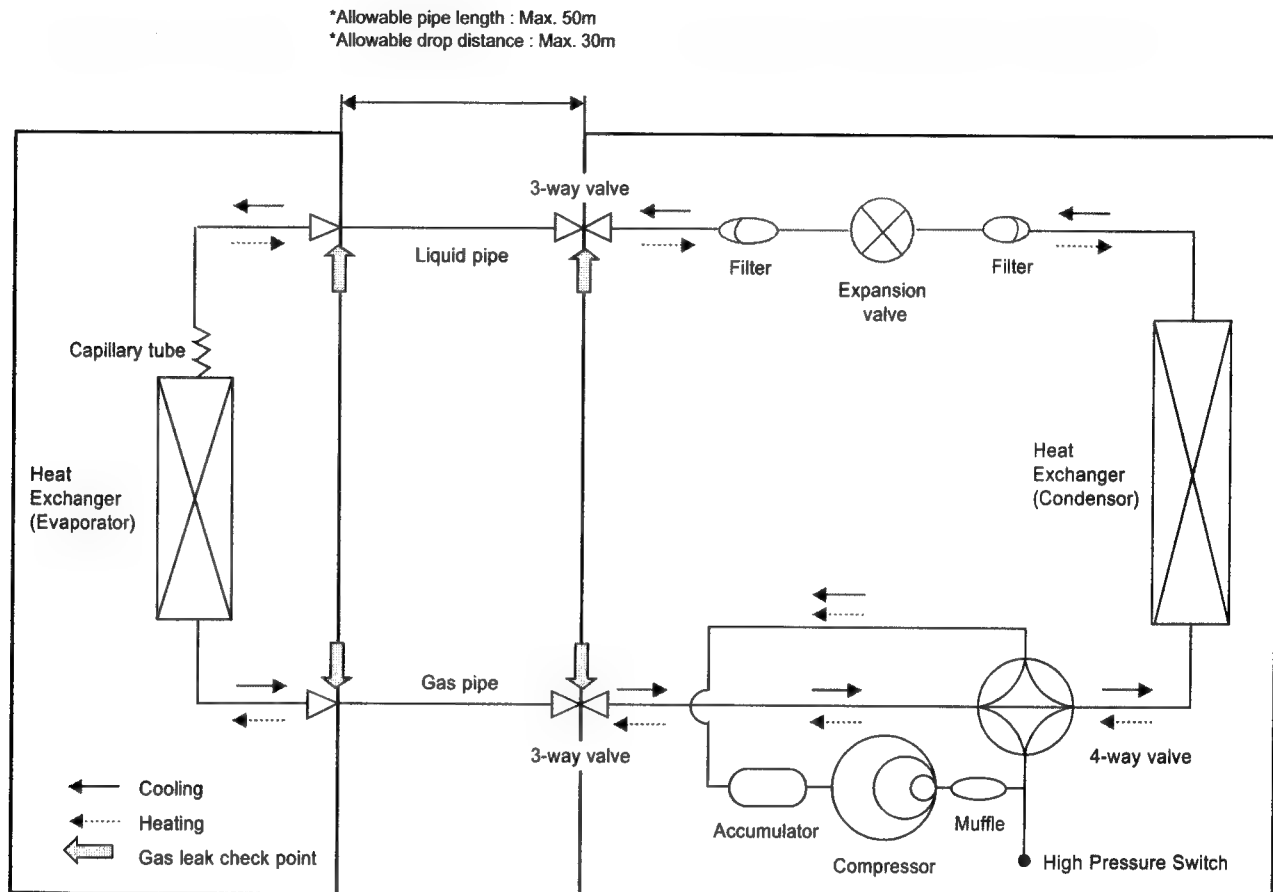
\* Amount of refilling per extension length of 1m; When extending the pipe length by more than 5m, 35(50gr:Outdoor Unit is higher Unit) of R-22; refrigerant should be refilled per extension length of 1m.



■ CH128EZM/UH128GZM, CH140EZM/UH140GZM

Indoor Unit (CH128EZM, CH140EZM)

Outdoor Unit (UH128GZM, UH140GZM)



\* Amount of refilling per extension length of 1m; When extending the pipe length by more than 5m, 50gr of R-22; refrigerant should be refilled per extension length of 1m.

## 4. Control specification & Troubleshooting

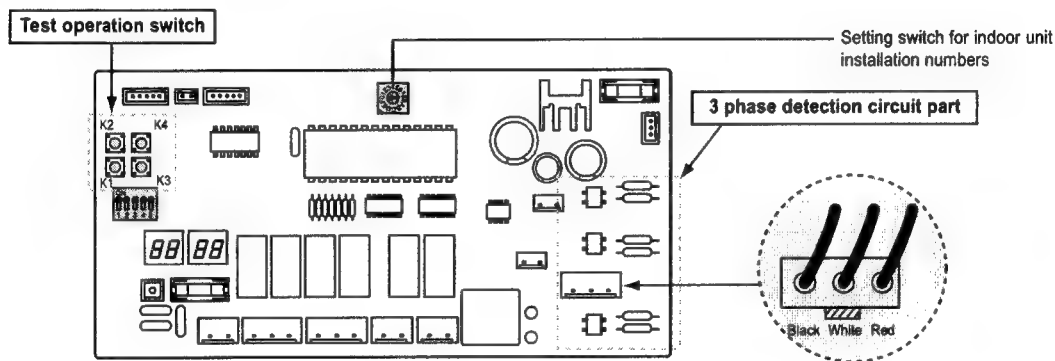
### 4-1 Operation specification

#### 4-1-1 Reverse phase/Cut phase detection(3 phase power model) : Error Code *P4* at trouble

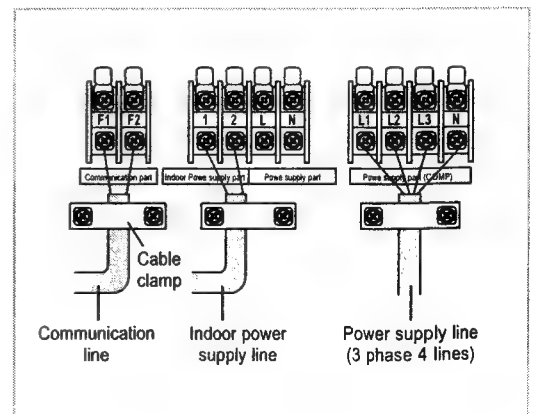
1. After input power, check the status of power used in 3 phase power compressor.  
If 3 phase(L1 phase-L2 phase-L3 phase) sequence is wrong or there is a phase power not being input, mark the error and maintain set to stop.

<ERROR Mark> : Error Code → *P4*

To mark *Er - P4 - Er - P4* to display part repeatedly



- To check L1-L2 phase/L1-L3 phase/L2-L3 phase voltage.
- If there is an abnormal voltage terminal, to check and measure the main power.
- If the 3 phase voltage is normal, to determine the sequence of 3 phase power to be changed and exchange two lines of outside power inlet or set power inlet.(example : To exchange the inlet lines of L1 phase and L2 phase)
- After above measurement is completed, to press the K3 of reset key and re-check.
- If the same error occurs in spite of re-check, to check the color of 3 phase check wire. As a result there is no trouble, exchange the PCB.



## 4-1 Operation specification (cont.)

1. After input power, outdoor MICOM check the indoor unit installed on the same system and wired remote controller, transmitter etc.(Tracking)

### ■ Tracking process marked on display part

- Left numeral is an address that outdoor unit transfers communication.

0 - 1 - 2 - 3 ... - F (Calling indoor unit)

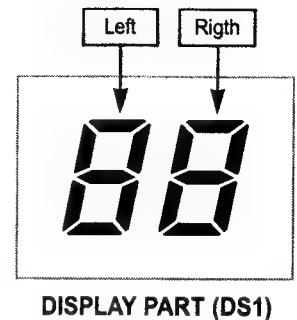
- Right numeral marks address that is answered.

- During the tracking, left calls indoor unit through

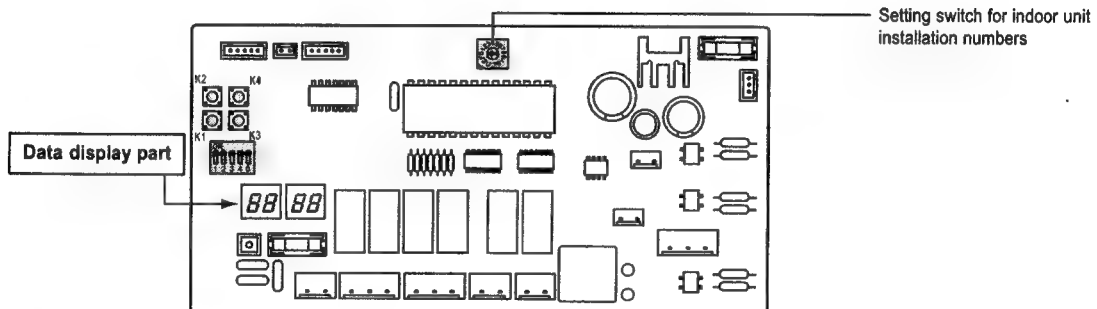
0 - 1 - 2 - 3 ... - d - E - F and checks. At this time connected indoor unit set on "0" and the indoor unit set 0 address marked on right.

Right side mark is marked by when left side is 0.

(If SW02(MAIN) that set indoor unit address is controlled to "0", indoor unit number marked on outdoor unit is marked by "0".)



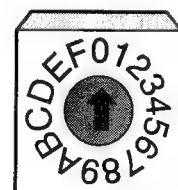
### ■ Option set part for Outdoor unit PCB



### Setting switch for indoor unit installation numbers

Counts of Indoor Unit Installation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Numbers of the switch	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

- Example : When the installed indoor unit is one, control the arrow of switch forward to '0' or '1' as figure.



## 4-1-2 Wired remote controller display specification at error occurring

Display	Description	Remarks
$E_r \leftrightarrow EA$	Communication error when there is no signal from outdoor unit to wired remote controller.	Communication error In case of no signal for 2 minutes
$E_r \leftrightarrow EB$	Communication error when there is no answer from wired remote controller to indoor unit.	
$E_r \leftrightarrow o0$	Indoor unit float switch error	Indoor unit related error
$E_r \leftrightarrow 90$	Indoor unit room temperature sensor open/short error	
$E_r \leftrightarrow r0$	Indoor unit evaporator temperature sensor open/short error	
$E_r \leftrightarrow f0$	EEPROM error	
$E_r \leftrightarrow u0$	EEPROM OPTION error	
$E_r \leftrightarrow u0$	Fan starting error (1-way cassette model only)	
$E_r \leftrightarrow Eo$	Outdoor unit error display when indoor unit stop • Outdoor unit sensor error (temperature and pressure) • Restart failure error • Self diagnose of Electronic valve opening /closing 6 times • Reverse phase, E2(Communication error)	Outdoor related error (Outdoor related error displays key error)
Overlapping error mark displays error in order, the next error is displayed at error correction.		

## 4-2 Troubleshooting





When error occurs in air conditioner, error code is displayed on indoor unit display lamp and outdoor unit.

### 4-2-1 Indoor unit LED error diagnosis

#### ■ Error detection and reoperation

- If error occurs during the operation, badness is indicated by LED flickering and all operation is stopped except LED.
- When reoperating by remote controller and switch determine the error mode after normal operation.

#### ■ Indoor unit LED lamp display at error detecting

Error type	LED lamp display				Remarks
	Operation 	Timer 	Air flow 	Filter 	
POWER RESET	●	×	×	×	
Room Temperature sensor error (OPEN/SHORT)	×	●	×	×	Applied indoor unit error display (Indoor unit display only during the operation)
Indoor heat exchanger temperature sensor error	●	●	×	×	Applied indoor unit error display (Indoor unit display only during the operation)
Outdoor temperature sensor error Condensor temperature sensor error Discharge temperature sensor error	●	×	●	×	The whole indoor unit error display Outdoor unit separated Display (Indoor unit display only during the operation)
1. No communication for 2 minutes between indoor unit and outdoor unit Indoor unit detection (Communication error over 2 minutes) 2. Indoor unit received communication error signal from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. After completion of tracking, when outdoor unit transfers communication error due to mismatch installing numbers with communicating numbers (Communication error over 2minutes)	×	●	●	×	1. Indoor unit error (Display is unrelated with operation) 2. Outdoor unit error (Display is unrelated with operation)
Communication error between indoors (Operation multi at the same time anf group control)	●	×	×	●	Indoor unit display
Self diagnosis error display(including non-detected indoor unit) 1. Electronic valve closing status error 2. Electronic valve opening status error	×	●	●	●	Applied indoor unit error Display Outdoor unit separated Display (Indoor unit display only during the operation)
1. The sixth detection of high temperature of Cond 2. The sixth detection of high temperature of Discharge 3. Reverse phase error	×	●	●	●	The whole indoor unit error display Outdoor unit separated Display (Indoor unit display only during the operation)
Detection of floating S/W	×	×	●	●	
Error to the set of option for auxiliary control device	×	●	×	●	
EEPROM ERROR	●	●	●	×	
EEPROM OPTION ERROR	●	●	●	●	

● : On    ● : Flickering    × : Off

## 4-2-2 Outdoor unit display specification at error occurring

NO	Display		Description	Remarks
	DIS1	DIS2		
1	<i>Er</i> ↔ <i>P0</i>	<i>OFF</i>	High discharge temperature(Protection control)	Outdoor protection control related error
2	<i>Er</i> ↔ <i>P1</i>	<i>OFF</i>	High condensor temperature(Protection control)	
3	<i>Er</i> ↔ <i>P4</i>	<i>OFF</i>	Reverse phase detection error (Protection control)	
4	<i>Er</i> ↔ <i>P5</i>	<i>OFF</i>	Compressor stop due to frozen evaporator of indoor unit (every times)	
5	<i>Er</i> ↔ <i>P6</i>	<i>OFF</i>	Error of momentary power failure(Disappears when the unit is Off/On)	
6	<i>Er</i> ↔ <i>P9</i>	<i>OFF</i>	During the defrosting operation (Heat pump model only)	
7	<i>Er</i> ↔ <i>t1</i>	<i>OFF</i>	Outdoor temperature SENSOR ERROR (OPEN/SHORT)	Outdoor sensor related error 1 - The whole outdoor unit sensor error detection should be done during the indoor unit operation only.(But ,transferring to communication data by sensing is allowed at any time.)
8	<i>Er</i> ↔ <i>t2</i>	<i>OFF</i>	Condensor temperature SENSOR ERROR (OPEN/SHORT)	
9	<i>Er</i> ↔ <i>t3</i>	<i>OFF</i>	Discharge temperature SENSOR ERROR (OPEN/SHORT)	
10	<i>Er</i> ↔ <i>E1</i>	<i>OFF</i>	After tracking completion, system down due to communication error	Communication and indoor unit error related
11	<i>Er</i> ↔ <i>E2</i>	<i>OFF</i>	To mismatch the indoor unit number communicated with setting indoor unit after 5 times tracking completion	
12	<i>Er</i> ↔ <i>E3</i>	<i>OFF</i>	Floating switch error from indoor unit	
13	<i>Er</i> ↔ <i>q0</i>	<i>OFF</i>	Indoor unit room temperature sensor open/short error	Indoor/Outdoor unit self diagnosis related
14	<i>Er</i> ↔ <i>r1</i>	<i>OFF</i>	Indoor unit evaporator temperature sensor open/short error	
15	<i>Er</i> ↔ <i>G4</i>	<i>OFF</i>	Outdoor unit electronic valve opening error (Detecting over 1 time)	
16	<i>Er</i> ↔ <i>G5</i>	<i>OFF</i>	Outdoor unit electronic valve closing error (Detecting over 1 time)	
17	<i>tU</i> or <i>tO</i> flickering	<i>OFF</i>	<i>tU</i> (below -5°C at cooling), <i>tO</i> (over 30°C at heating)	Operation status display
Display priority order at overlapping error : E1→E4→P0→P1→P5→P6→t1→t2→t3→tu→to→G4→G5→E3→qx→rx→K1, 2, 3, 4, 5 - If several indoor unit report the same error, the fast address is priority.				

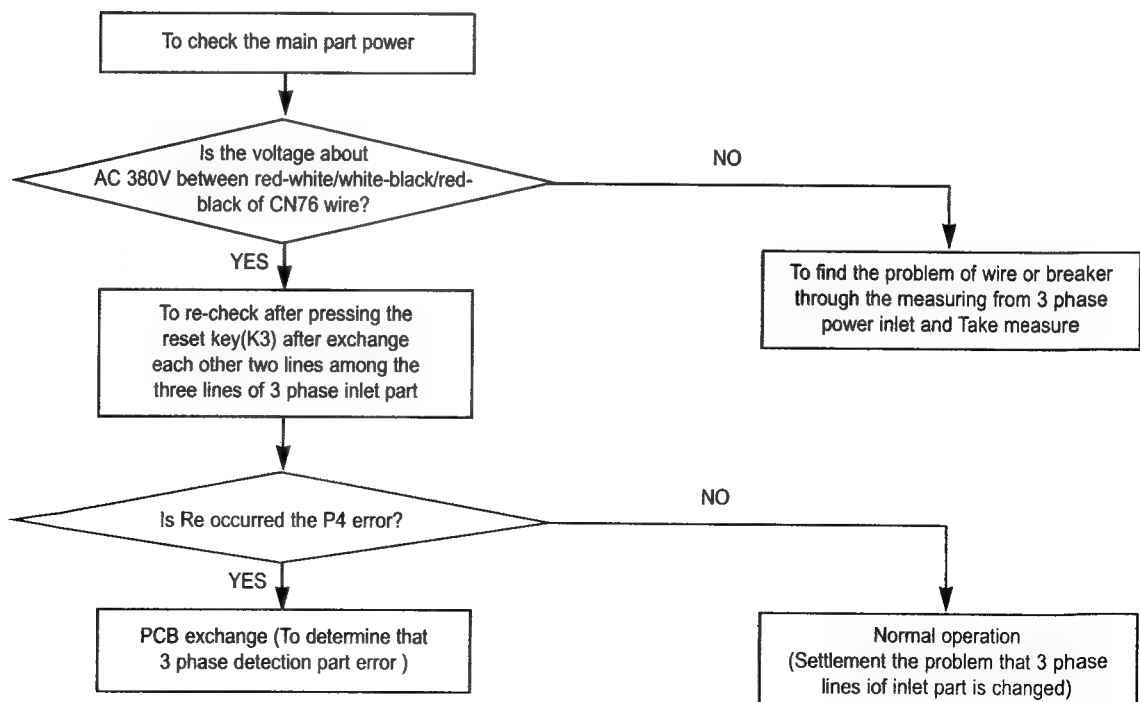
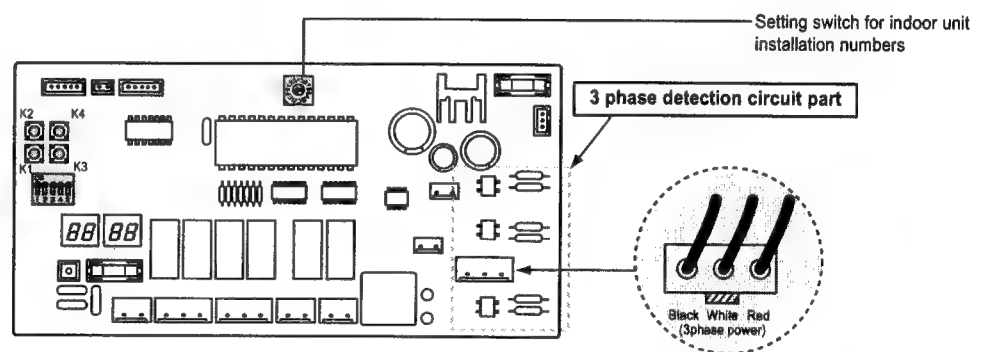
## 4-3 Sequence for trouble diagnosis

### 4-3-1 Detection for the reverse phase in 3 phase power(Applied to 3 phase model only)

Outdoor unit display	Er → P4 (Detection for the reverse phase in 3 phase power)
Indoor unit display	× (Operation) ● (Timer) ● (Airflow) ● (Filter)
How to determine	In case that phase sequence is reversed or one or all phase power is not taken in by comparing the sequence of wave type of 3 phase detection circuit (P4 error is released automatically when phase power is return to normal)
Reason of error	- 3 phase power (L1, L2, L3, N) connection error - When 3 phase is not input.

#### \* Inspection items :

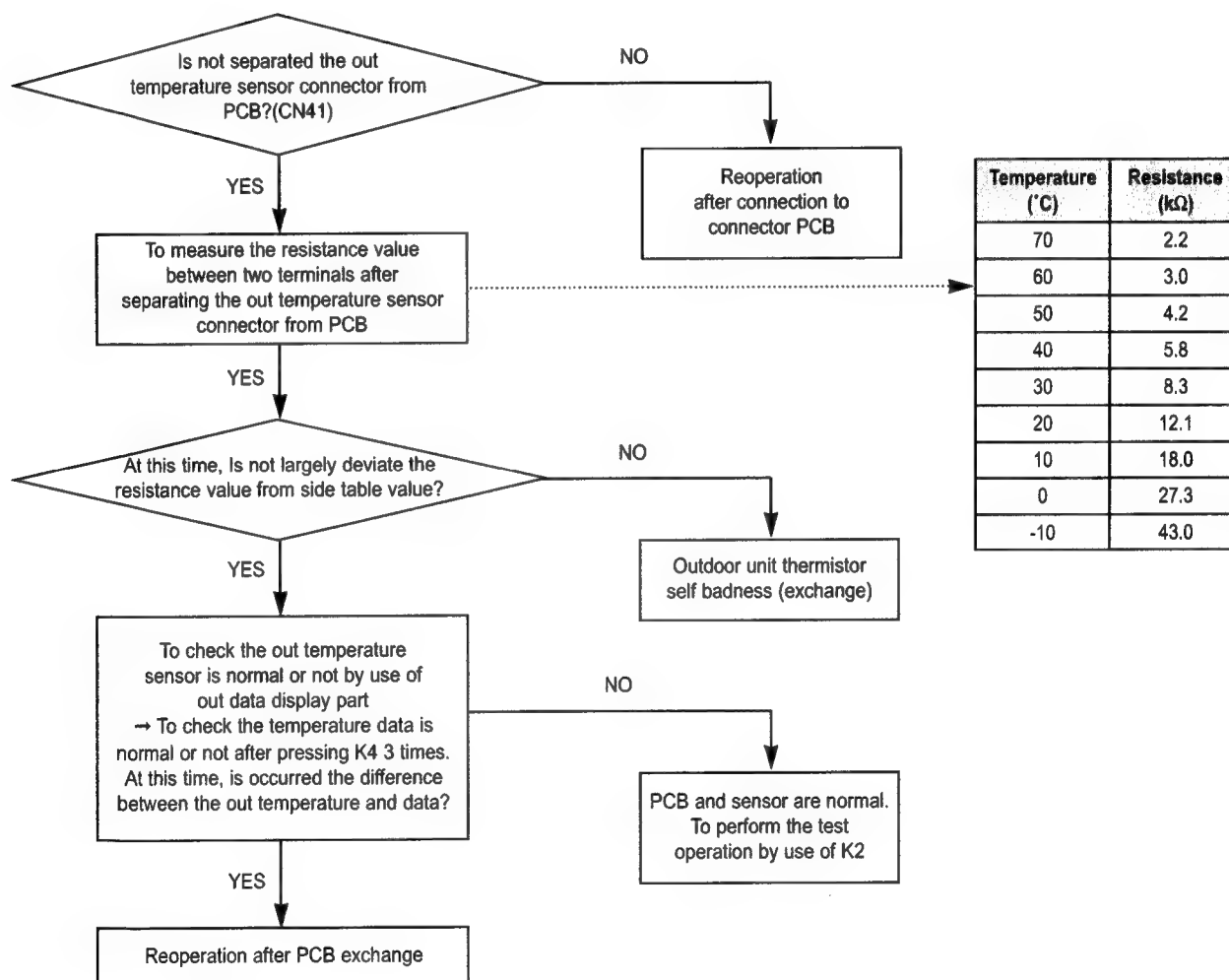
- To confirm the power of 3 phase detection part on outdoor PCB.
- The color of wire on L1, L2, L3 of 3 phase detection part connector → Red, White, Black(Be careful not to change the color and sequence)





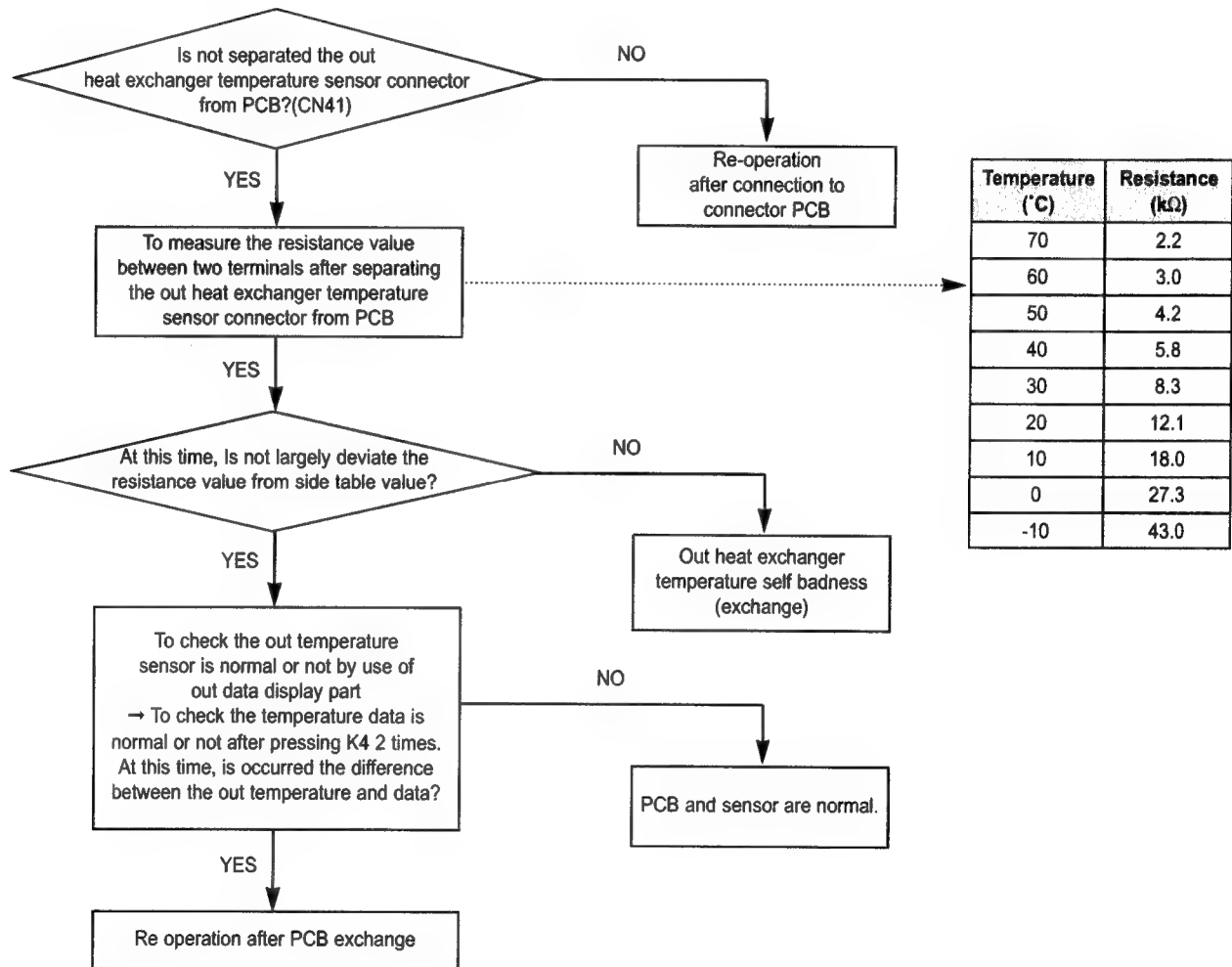
## 4-3-2 Out temperature sensor(OPEN/SHORT)

<b>Outdoor unit display</b>	Er → t1 (Out temperature sensor OPEN/SHORT error)
<b>Indoor unit display</b>	× (Operation) ● (Timer) ● (Airflow) ● (Filter)
<b>How to determine</b>	Disconnection and short of out temperature sensor
<b>Reason of error</b>	Disconnection or leak of applied sensor



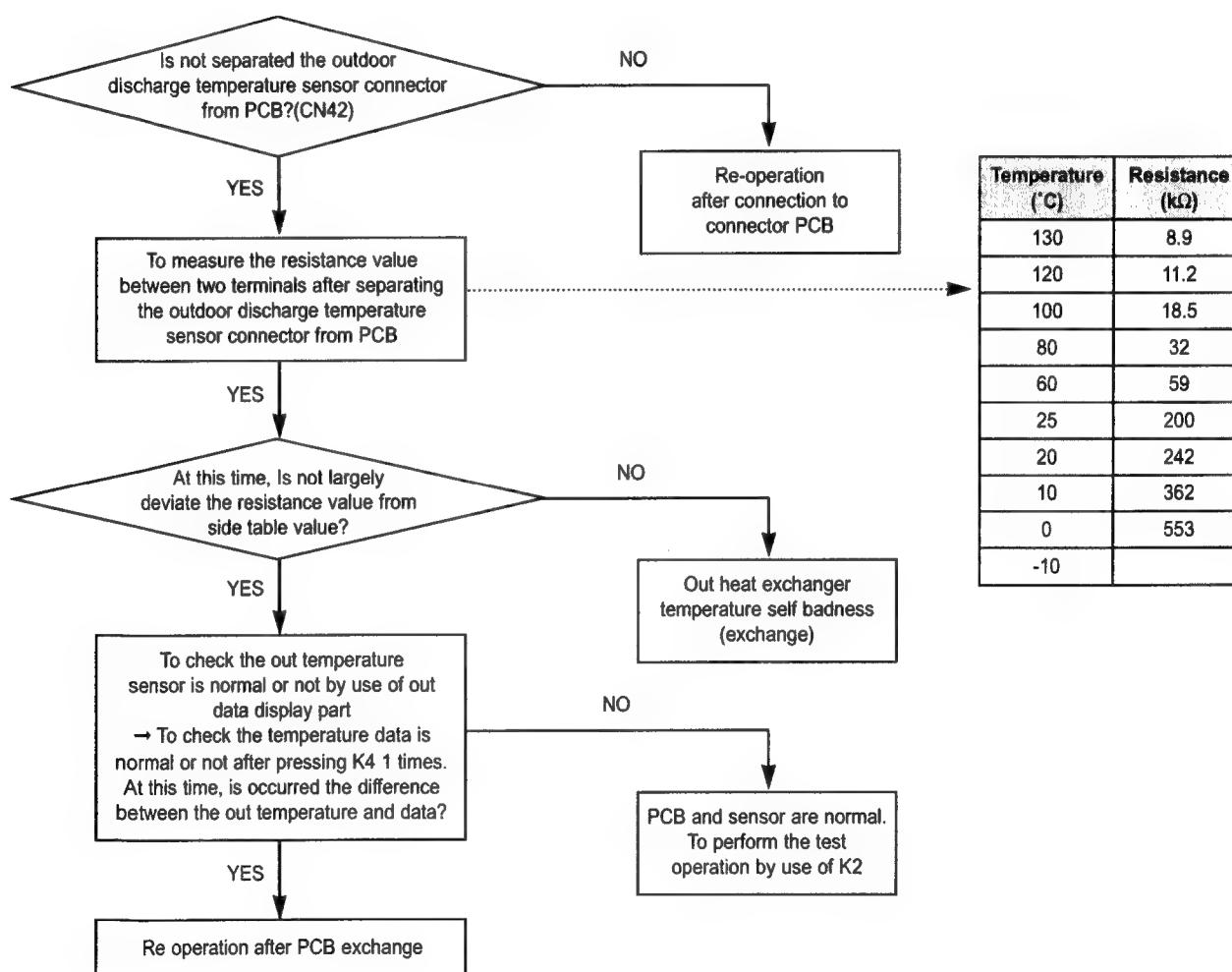
### 4-3-3 Out heat exchanger temperature sensor error(OPEN/SHORT)

<b>Outdoor unit display</b>	<b>Er → t2 (Out heat exchanger temperature sensor error(OPEN/SHORT))</b>
<b>Indoor unit display</b>	× (Operation) ● (Timer) ● (Airflow) ● (Filter)
<b>How to determine</b>	Disconnection and short of out heat exchanger temperature sensor
<b>Reason of error</b>	Disconnection or leak of Applied sensor



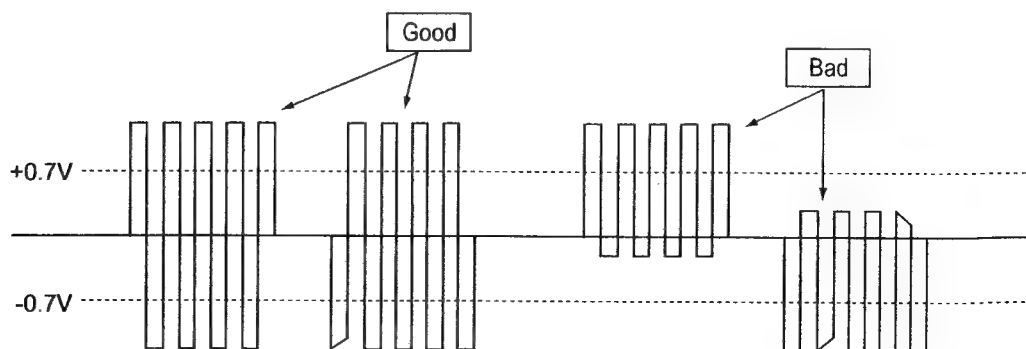
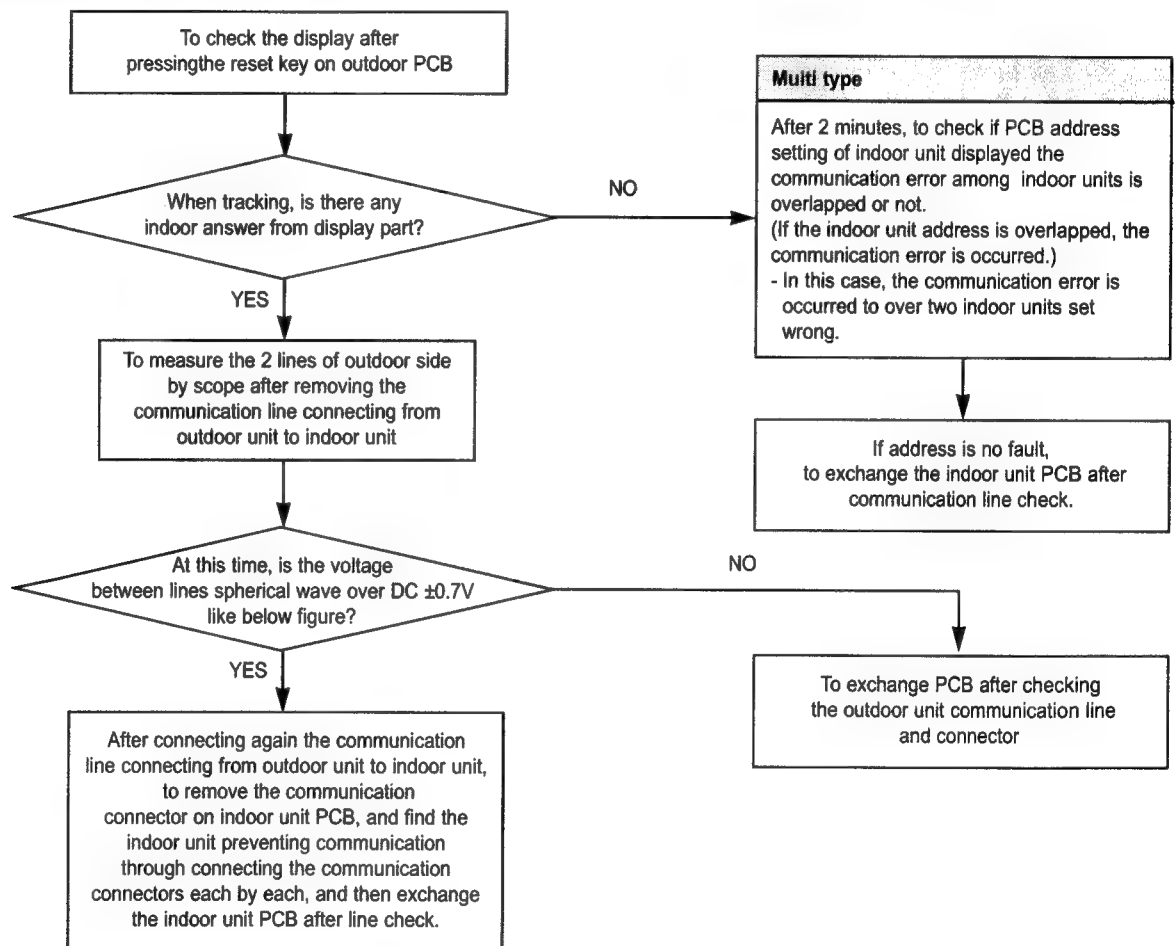
#### 4-3-4 Outdoor discharge temperature sensor error(OPEN/SHORT)

<b>Outdoor unit display</b>	Er → t3 (Outdoor discharge temperature sensor OPEN/SHORT error)
<b>Indoor unit display</b>	● (Operation) × (Timer) ● (Airflow) × (Filter)
<b>How to determine</b>	Disconnection and short of out heat exchanger temperature sensor
<b>Reason of error</b>	Disconnection or leak of Applied sensor



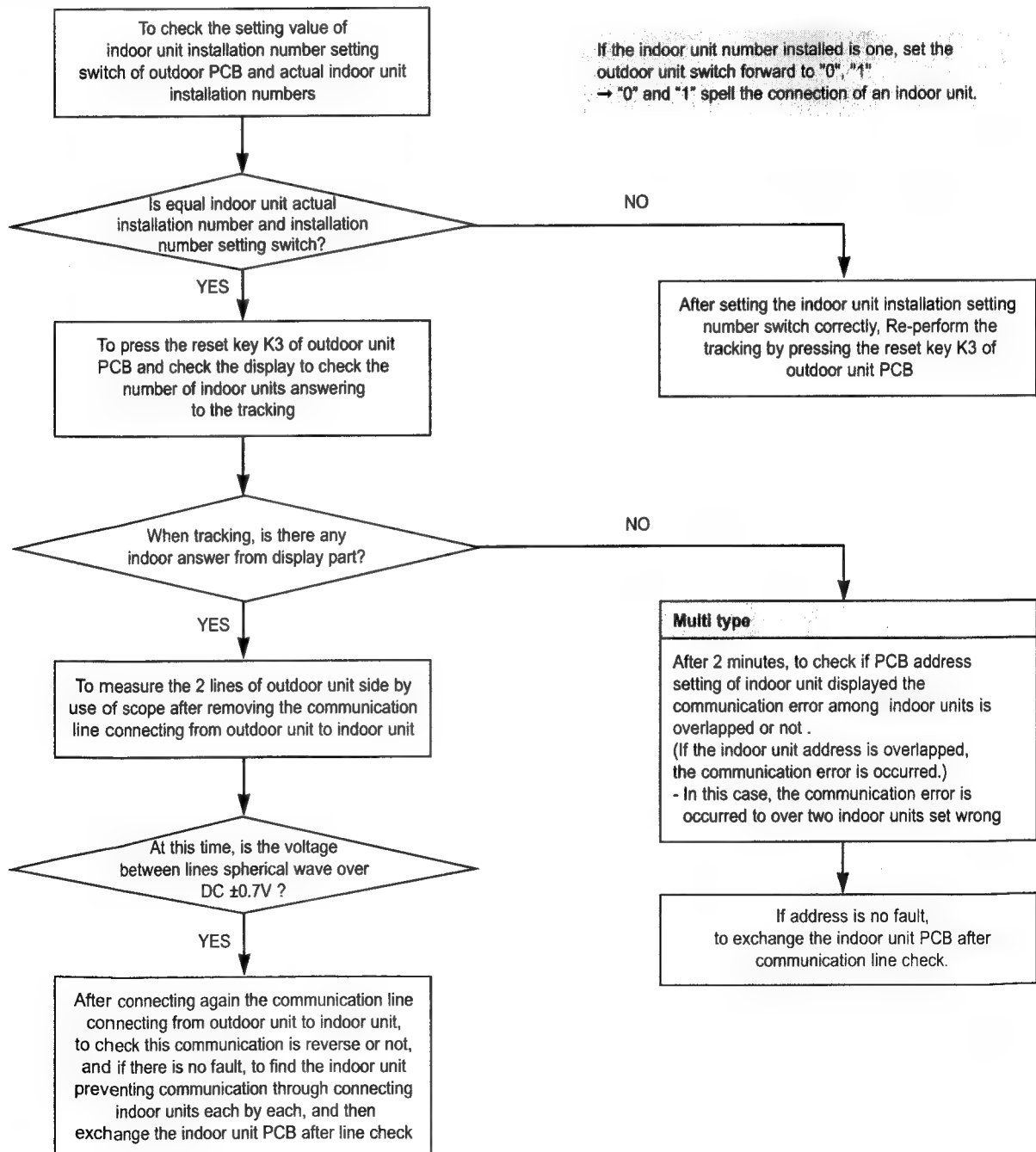
### 4-3-5 Communication error during the operation

<b>Outdoor unit display</b>	<b>Er → E1 (Communication error during the operation)</b>
<b>Indoor unit display</b>	× (Operation) ● (Timer) ● (Airflow) ● (Filter)
<b>Disconnection and short of communication lines</b>	Disconnection and short of out heat exchanger temperature sensor
<b>Reason of error</b>	Disconnection or leak of Applied sensor



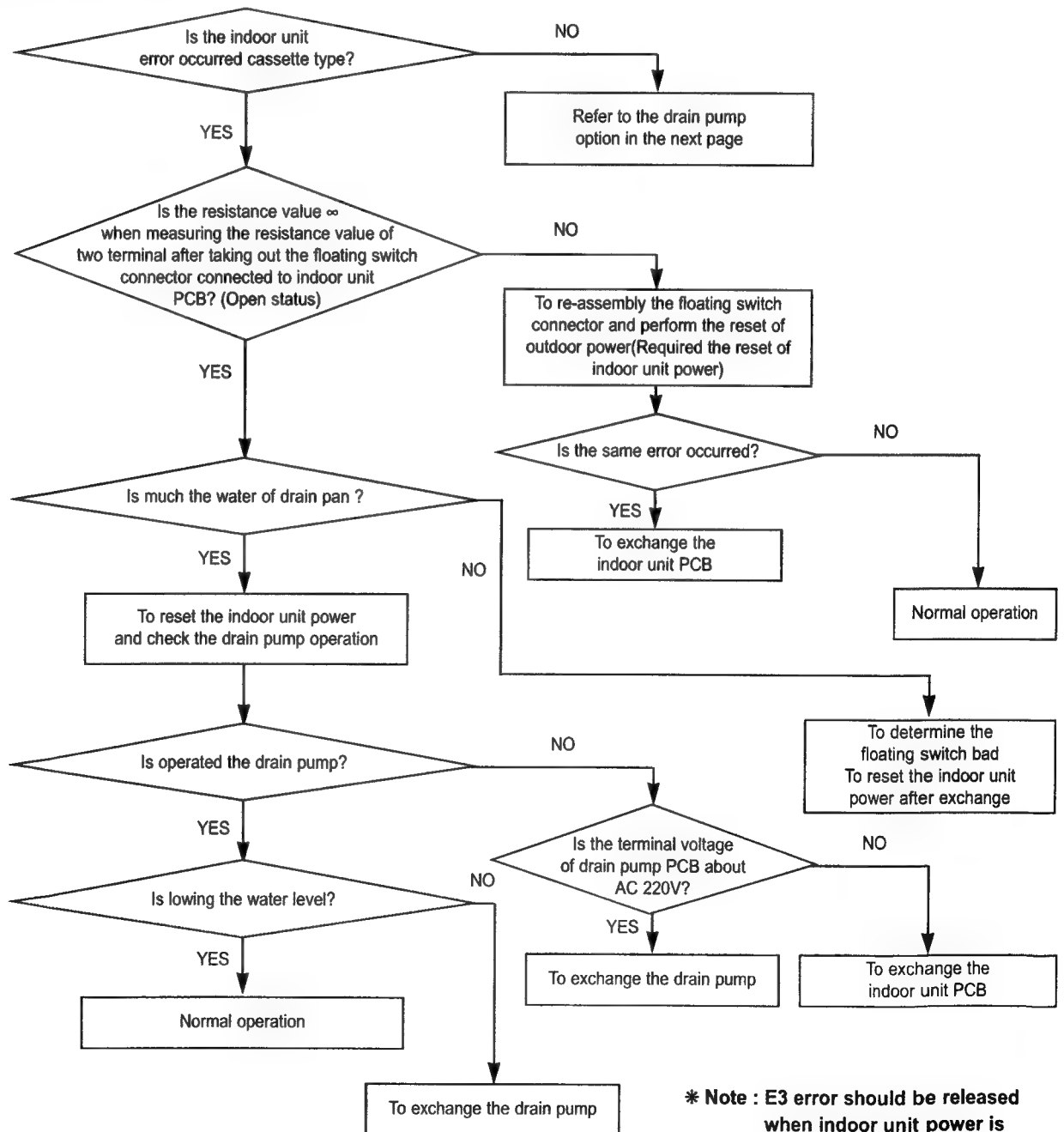
#### 4-3-6 Communication error between indoor and outdoor after initial power input.

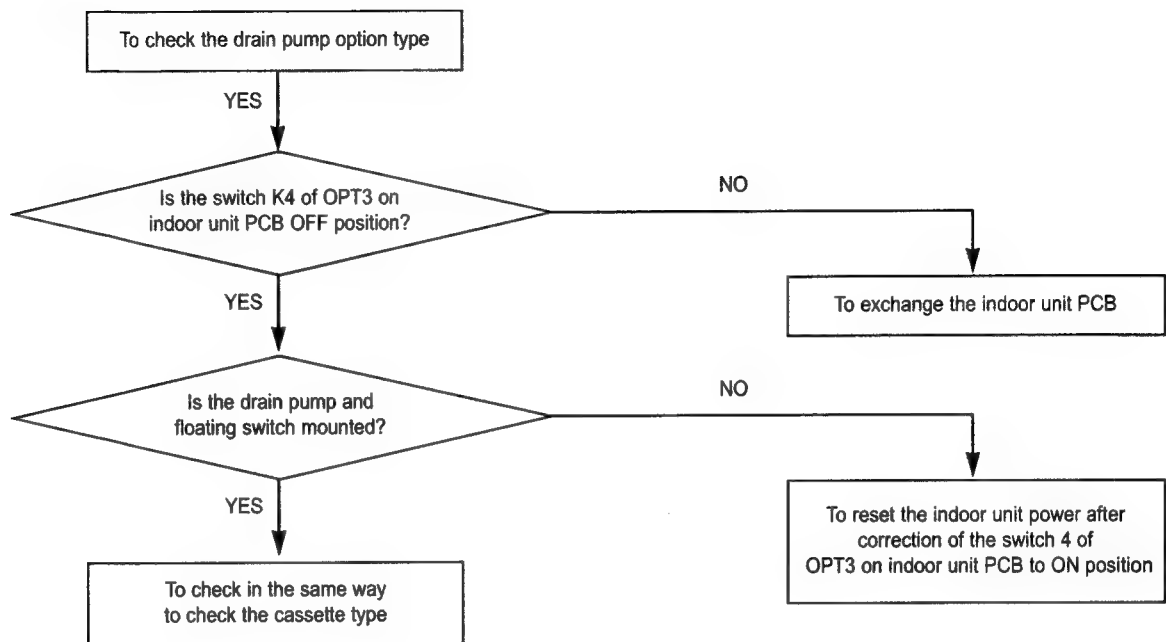
<b>Outdoor unit display</b>	Er → E2 (Tracking error)
<b>Indoor unit display</b>	× (Operation) ● (Timer) ● (Airflow) × (Filter)
<b>How to determine</b>	Mismatching the communicating indoor unit and setting switch indoor numbers When outdoor tracking
<b>Reason of error</b>	Communication error between the indoor unit and outdoor unit, and installation number switch setting miss



### 4-3-7 Indoor floating switching error

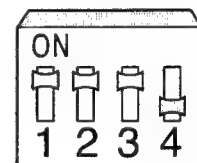
<b>Outdoor unit display</b>	<b>Er → E3 (Indoor floating switching error)</b>
<b>Indoor unit display</b>	× (Operation) × (Timer) ● (Airflow) ● (Filter)
<b>How to determine</b>	The status continues over 1 minute that indoor unit floating switch is opened.
<b>Reason of error</b>	The rising of water level of drain pan due to the disorder of indoor unit drain pump, the badness of detection sensor



**Indoor floating switching error (cont.)**

**\* Note : E3 error should be released when indoor unit power is reset.**

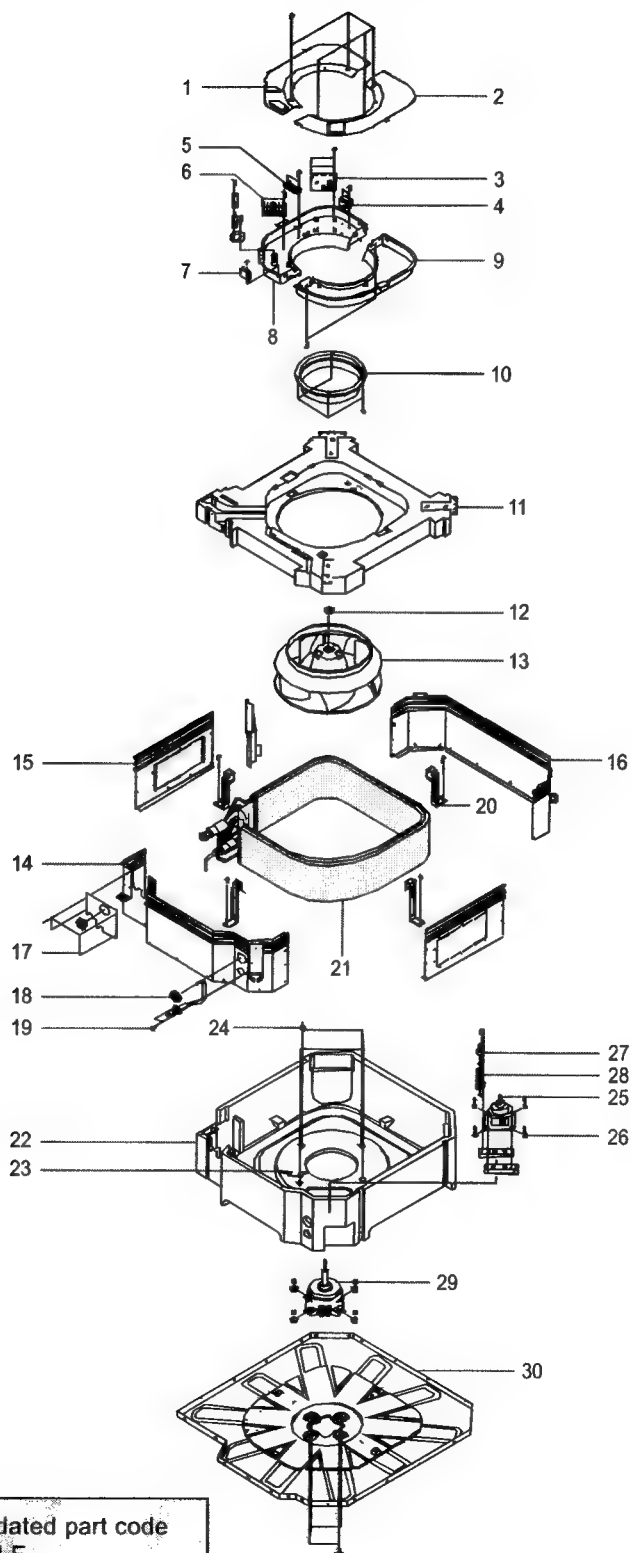
The position of switch	Function
ON	Non use of the drain pump
OFF	Use of the drain pump





## 5. Exploded Views and Parts List

### 5-1 Indoor Unit



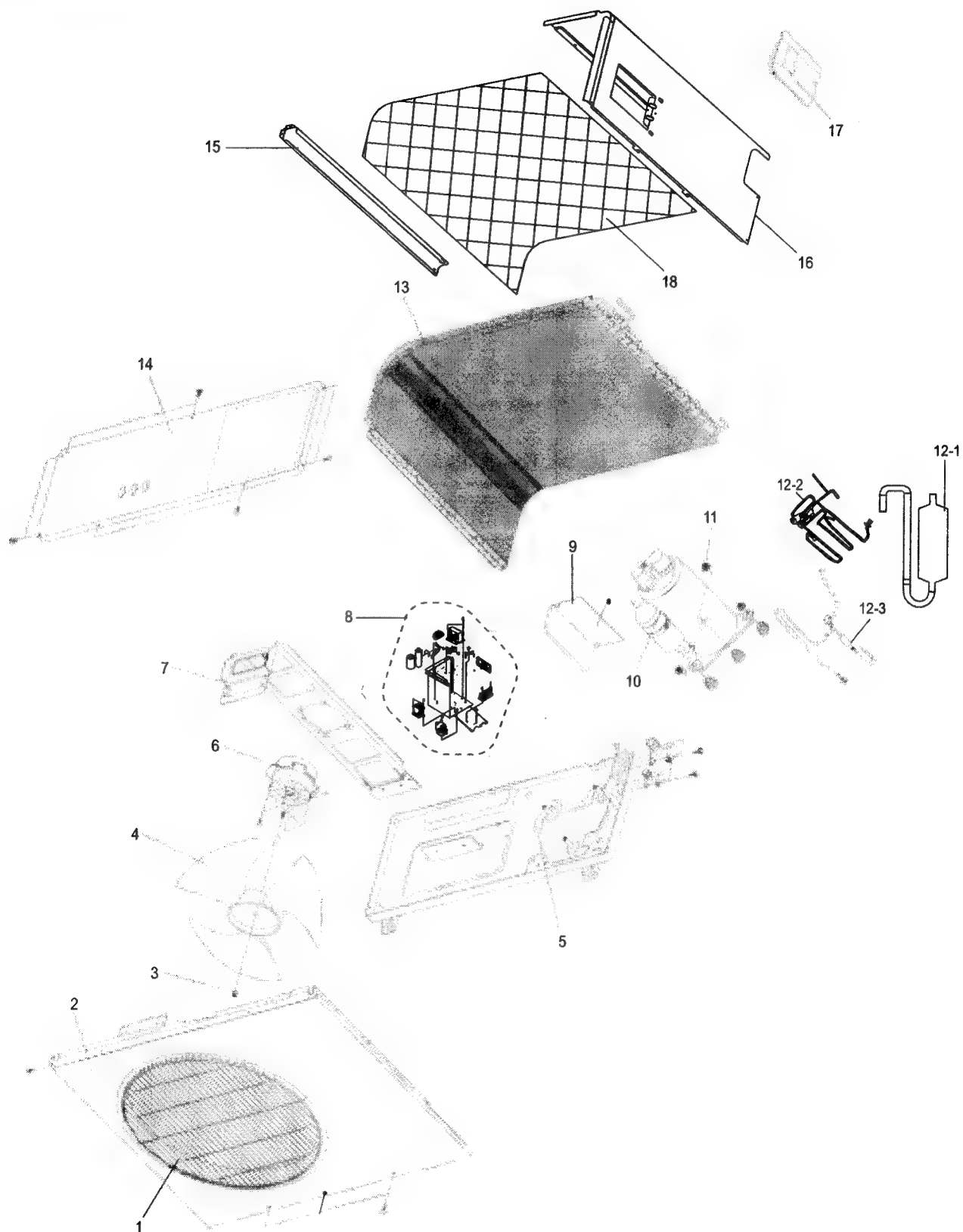
You can search for the updated part code number through the ITSELF.  
URL : <http://itself.sec.samsung.co.kr>

## ■ Parts List

No.	Code No.	Description	Specification	Q'TY		
				CH070EZM	CH105EZM	CH128EZM CH140EZM
1	DB63-00620A	COVER-CONTROL	ABS, T2.0	1	1	1
2	DB63-00621A	COVER-CONTROL SUB	HIPS, T2.0	1	1	1
3	DB93-00843F	ASSY PCB MAIN-DMP	DPM, INDOOR UNIT ASSY PCB	1	1	1
4	DB26-10065B	TRANS-POWER	DC17, AC230, 50HZ	1	1	1
5	DB65-00029M	TERMINAL-BOARD 5P	250V, 20A, 4P	1	1	1
6	DB65-00029U	TERMINAL BLOCK-6P	250V, 20A, 6P	1	1	1
7	2301-001367	C-FILM, MPE-PPF	6000nF, +10-5%, 450V, BK 58*25*40mm	-	-	1
	2301-001367	C-FILM, MPE-PPF	4000nF, 450V, BK	-	1	-
	DB61-01211A	C-FILM, MPE-PPF	3.5nF, 450V, BK	1	-	-
8	DB67-00269A	BASE-CONTROL	ABS, T2.5	1	1	1
9	DB94-00297A	BASE-CONTROL SUB	HIPS, T2.5	1	1	1
10	6021-000131	FAN-BELL MOUTH	HIPS, T2.0	-	-	1
11	DB94-00071B	ASSY DRAIN CUSHION	NEW 4WAY CASSETTE, EPS CUSHION	1	1	1
12	DB90-00983A	NUT-HEXAGON	2C, M12, ZPC(YEL), SM20C	1	1	1
13	DB64-00718A	ASSY FAN-TURBO	TORSHIONAL BUSH BOSS, 7 BLADE	1	1	1
14	DB90-00984A	ASSY CABINET FRONT	NEW 4WAY CASSETTE, SGCC-M, T0.7	1	1	1
15	DB90-01092A	CABINET-SIDE	NEW 4WAY CASSETTE, SGCC-M, T0.7	2	2	2
16	DB90-01010A	ASSY CABINET BACK	NEW 4WAY CASSETTE, SGCC-M, T0.7	1	1	1
17	DB94-00345A	ASSY COVER-PIPE	NEW 4WAY CASSETTE, SGCC-M, T0.7	1	1	1
18	DB61-01206A	ASSY COVER-DRAIN	KS1003SAC023/A, SAUERMAN, 601/h 230V, 50-60Hz	1	1	1
19	DB61-01481A	ASSY-HOSE DRAIN	EPT T1.5, FOAM-PE T10	1	1	1
20	DB96-02307A	HOLDER-EVAP	NEW 4WAY CASSETTE, SGCC-M, T0.8, 2*12	-	-	4
	DB96-02491C	HOLDER-EVAP	NEW 4WAY CASSETTE, SGCC-M, T0.8, 2*9	4	4	-
21	DB96-02491B	ASSY EVAP-UNIT	2*12, CH140EZM, NEW 4WAY CASSETTE	-	-	1
	DB90-00985A	ASSY EVAP-UNIT	2*9, CH105EZM, NEW4WAY CASSETTE	-	1	-
	DB90-01083A	ASSY EVAP-UNIT	2*8, CH105EZM, NEW4WAY CASSETTE	1	-	-
22	DB96-00646A	ASSY BASE-CUSHION	CH140EZM, NEW 4WAY CASSETTE	-	-	1
	DB61-01468A	ASSY BASE-CUSHION	CH070EZM, NEW 4WAY CASSETTE	1	1	-
23	DB31-00198A	CUSHION-FAN	AFPCH145EA0, EPS	-	-	1
24	DB73-00022B	CLIP-BRUSH	NEW 4WAY CASSETTE, GRAY	-	-	4
25	DB95-00131C	PUMP-DRAIN	KS1003SAC023/A, SAUERMAN, 301h/h 230V, 50-60Hz	1	1	1
26	DB61-01522A	RUBBER PUMP	NBR(BLK)	4	4	4
27	DB95-00131C	ASSY-SENSOR FLOAT	PP, 23.5, L16.5	1	1	1
28	DB61-01522A	BRACKET-SWITCH	SGCC-M, T2.0	1	1	1
29	DB31-00096C	MOTOR FAN	OSME626SAC(S814), 4WAY(48K), AC220V/50Hz, 700/630/560/360 RP	-	-	1
	DB31-00204D	MOTOR FAN	OSME626SAC(S806), 4WAY(36K), AC220V/50Hz, 560/510/460/320 RP	-	1	-
	DB31-00204C	MOTOR FAN	OSME626SAC(S807), 4WAY(24K), AC220V/50Hz, 500/460/420/270 RP	1	-	-
30	DB90-00482A	ASSY CABINET-BASE	SGCC-M, T0.7	1	1	1

## 5-2 Outdoor Unit

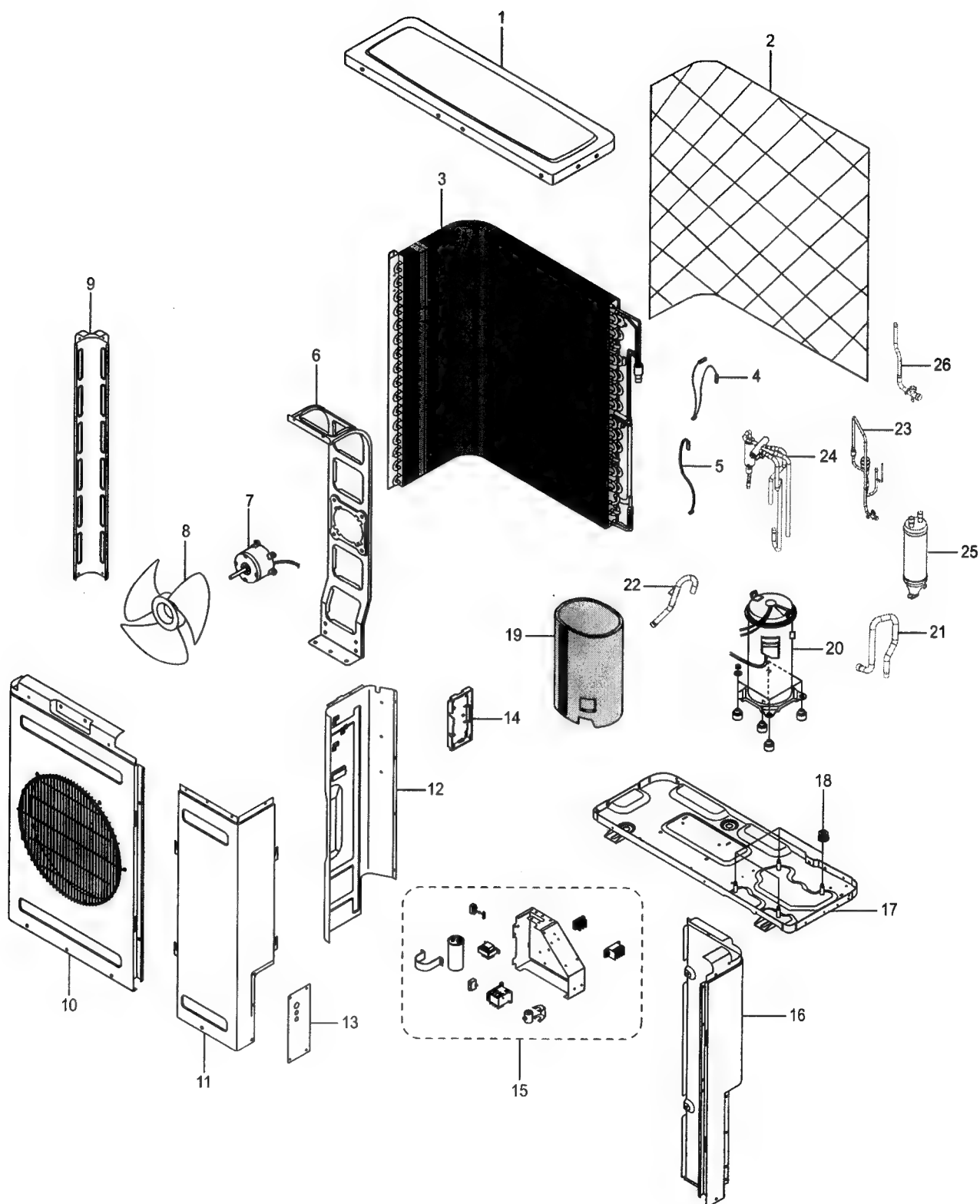
### ■ UH070EZMC



## ■ Parts List

No.	Code No.	Description	Specification	Q'TY
1	DB63-00260A	GUARD FAN	APH1816,-,-,-,-,-,CHINA	1
2	DB90-01145A	ASSY-CABI FRONT	ASSY	1
3	DB60-30028A	NUT-WASHER	HEX 2C M8 ZPC	1
4	DB67-50074A	FAN-PROPELLER	AS-1569,-,-	1
5	DB90-00970E	ASSY BASE OUT-PART	(PAINT+SEAL);KFRD-67W	1
6	DB31-00027E	MOTOR-FAN OUT	2 STEP,WEILING	1
7	DB95-00205A	ASSY MOTOR-B/K	APH1816,CHINA	1
8	DB93-02484A	ASSY CONTROL OUT	HP, UH070EZM	1
9	DB94-50039C	ASSY PARTITION	ASM-3500A,-	1
10	DB95-00201A	ASSY COMP	APH2416,SHV33C6-G,HITACHI	1
11	DB60-30028A	NUT-WASHER	HEX 2C M8 ZPC	3
12-1	DB96-02901A	ASSY ACCUMULATOR	ASSY	1
12-2	DB96-02902A	ASSY 4-WAY VALVE	ASSY	1
12-3	DB96-02903A	ASSY EXPANSION VALVE	ASSY	1
13	DB98-02909A	ASSY-COND PART	APH2488,CHINA	1
14	DB90-10616G	ASSY CABI-UP	APE2468,CHINA(ALL)	1
15	DB63-00692A	GUARD COND	1-PJT,SECC-P,T=1.6,	1
16	DB64-00798B	CABINET-SIDE RH	W1-PJT,SECC-	1
17	DB63-10490B	COVER-CONTROL	ABS(V0),-,SC-90073R,-	1
18	DB61-00821B	GUIDE-SCREEN	AP-L1540,P.E.H 100%,T2.5,10	1

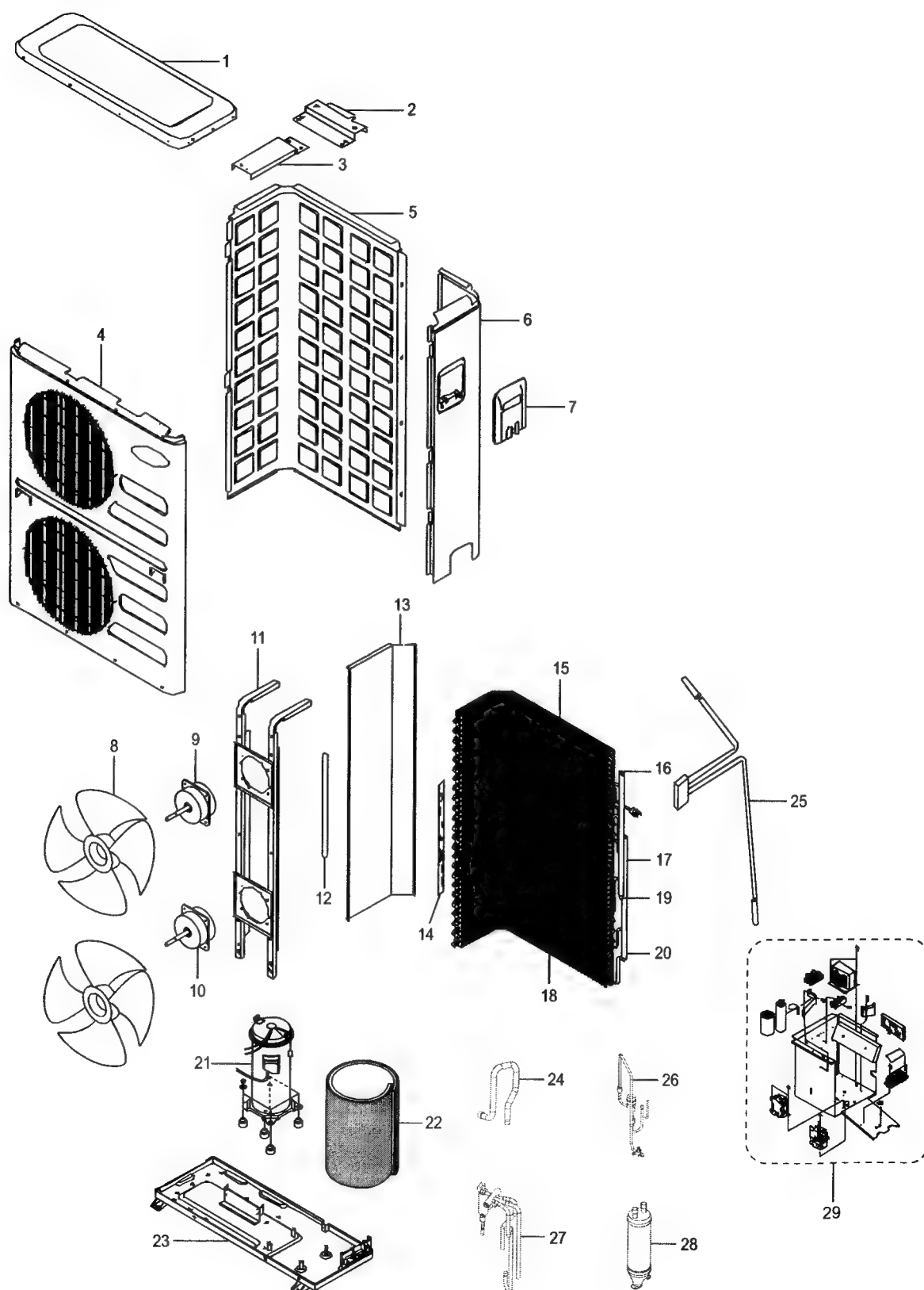
■ UH105GZM



## ■ Parts List

No.	Code No.	Description	Specification	Q'TY
1	DB90-01029B	ASSY CABINET-TOP	UH105GZM, ASSY(SECC-P)	1
2	DB61-01348A	GUIDE-SCREEN	RVMPC035B2M0	1
3	DB96-02724A	ASSY COND-UNIT	CH105GZM, 2*36	1
4	DB32-00021H	THERMISTOR	-,10Kohm,-,-20~100,-,-,-,-	1
5	DB32-00071A	THERMISTOR	-,,-,-,-,-,-,-,RFPC020B2M0	1
6	DB61-01173B	BRACKET MOTOR	GH070ECM,-,-,-,-,-	1
7	DB31-00060P	MOTOR FAN-OSMED-1166SRC	OSME1166SRC, FAN MOTOR, 1.03/0.58,50,210/115,220, 900/500,50,220,75deg, -,	1
8	DB67-00140A	FAN-PROPELLER	AS+GF 20%,BLK,OD460,B-PJT	1
9	DB64-00857A	CABINET-BACK LF	RVMC035B2M0,SECCP,T1.0,W81,L947,-,WHITE GRAY,-	1
10	DB90-01026A	ASSY-CABI FRONT LF	RVMPC035B2M0	1
11	DB90-01224A	ASSY CABINET FRONT-RH	UH105GZM,ASSY	1
12	DB94-00319A	ASSY PARTITION-OUT	RVMPC035B2M0	1
13	DB90-01222A	ASSY-WIRE PLATE	UH105GZM,SECC-P,SC-90073T	1
14	DB61-00152A	CASE-PCB-OUT	AE-240E,T2.5,ABS,-,-,BLK,-	1
15	DB93-02266A	ASSY CONTROL OUT	HP,-,-,-,-,-,UH105GZM	1
16	DB90-01223A	ASSY CABINET BACK-RH	UH105GZM,ASSY	1
17	DB90-01030B	ASSY BASE OUT	UH105GZM,DPM 3.5HP OUTDOOR	1
18	DB73-10023A	GROMMET-COMP	-,EPDM,T41,-,-,-,-,BLK,-	4
19	DB72-00237A	INSULATION-SOUND	T12,W630,L390,-,-,-,ACH3600G	1
20	DB95-00435A	ASSY-DIGITAL SCROLL COMP	CH105EZM,ZR45KC-TFD	1
21	DB62-02004A	TUBE-SUCTION	-,UH05GZM,-,-,-,-,-	1
22	DB96-02692A	ASSY TUBE-DISCHARGE	CH105GZM,-	1
23	DB96-02693A	ASSY-EXPANSION VALVE	CH105GZM,-	1
24	DB96-02694A	ASSY-4WAY VALVE	CH105GZM,-	1
25	DB96-02695A	ASSY-ACCUMULATOR	CH105GZM,-	1
26	DB96-02697A	ASSY-VALVE SERVICE	UH105GZM,-	1

■ UH128GZM/UH140GZM



## ■ Parts List

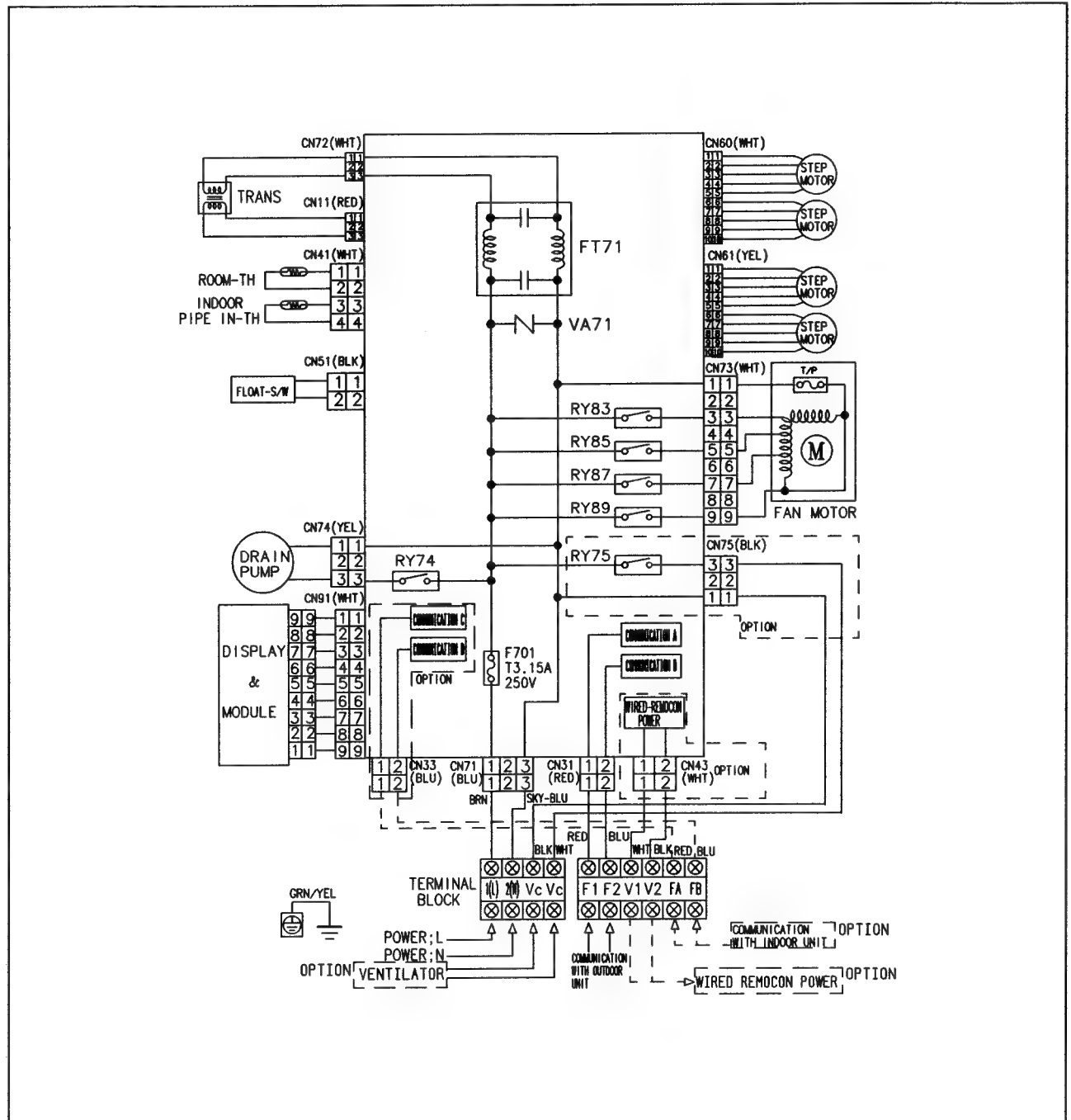
No.	Code No.	Description	Specification	Q'TY
1	DB90-00626A	ASSY CABI-TOP	RVSH040H2C0,CASSETTE-TYPE	1
2	DB61-00398A	SUPPORTER-MOTOR	AP-8750,SGCC-M,T1.6,-,-,-	1
3	DB61-30615A	SUPPORTER-FRAME	-,SGCC-M,T1.2,-,-,-,AP-18000	1
4	DB90-00250D	CABINET FRONT	RVSH040B2C0,-,-,-,-,-	1
5	DB90-00551A	ASSY CABI BACK-LF	RVSH040B2C0,CASSETTE-TYPE	1
6	DB90-00550A	ASSY CABI BACK-RH	RVSH040B2C0,CASSETTE-TYPE	1
7	DB90-00144A	ASSY COVER-CONTROL	ASM-3500A,B,-	1
8	DB67-50067A	FAN-PROPELLER	ABS+GF20,D495,4BLADE	2
9	DB31-00060L	MOTOR FAN	OSME-1156SRC,OSME-1156SRC(S542)	1
10	DB31-00060M	MOTOR FAN	OSME-1156SRC,970,50,220,OSME-1156SRC(S543)	1
11	DB61-30276A	BRACKET-HOLDER	-,SGCC-M,Z,T0.8,-,-,-	1
12	DB61-30358B	SUPPORTER-UNIT OUT	-,SGCC-A,T1.2,-,-,-	1
13	DB67-30025A	PARTITION	-,SBHG1,T1,-,-,-,389.17X1239.46	1
14	DB61-30365A	SUPPORTER-COND	-,SBHG1,T1.6,-,-,-,499X22	1
15	DB96-01086D	ASSY COND-UP UNIT	RFSH060GDH0,W1.7,BENDING	1
16	DB96-01052A	ASSY-COLLECTOR IN UP	RVSH040H2C0,IN UP	1
17	DB96-01056A	ASSY-COLLECTOR OUT UP	RVSH040H2C0,OUT UP	1
18	DB96-01087F	ASSY COND-LOW UNIT	RVMH050CBM5,-	1
19	DB96-01053A	ASSY COLLECTOR IN LOW	RVSH040H2C0,IN LOW	1
20	DB96-01057A	ASSY-COLLECTOR OUT LOW	RVSH040H2C0,OUT LOW	1
21	DB95-10057J	ASSY-COMP-SCROLL	-,ZR61KC-TFD	1
22	DB72-00560A	INSULATION-SOUND	MUF-0911,FELT,T12,W410,L700,GREY,-,-,-	1
23	DB90-00247C	ASSY BASE OUT	RVMC050H2M0,DVMC SC-90073T	1
24	DB62-01593A	TUBE SUCTION	C1220T-0,T1.0,OD19.05,NEW 4WAY CASSETTE	1
25	DB32-00021E	THERMISTOR-ASSY OUT	103AT,-,-,-20~+100,-.5V,-.5V,DVS-OUT	1
26	DB96-02515A	ASSY-VALVE EXPANSION	UH140GZM,4Way_Cassette_48k	1
27	DB96-02302A	ASSY-4-WAY VALVE	UH140GZM,NEW 4WAY CASSETTE	1
28	DB96-01055A	ASSY-ACCUMULATOR	RVSH040H2C0,ACCUM	1
29	DB93-01156D	ASSY CONTROL OUT	HP,-,-,-,-,-,-,-,-,-,UH175GCM,-	1



# MEMO

## 6. Wiring Diagrams

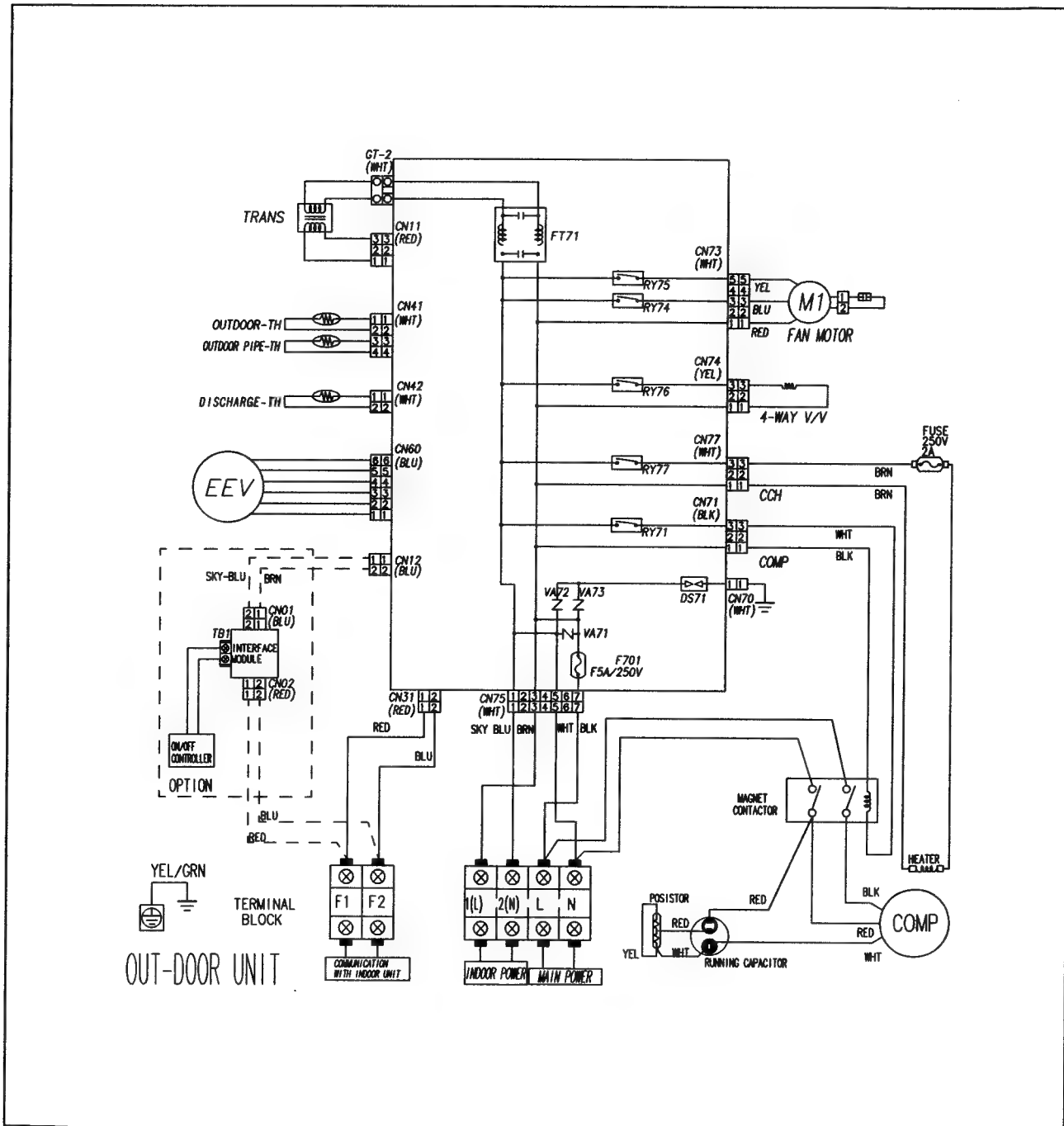
### 6-1 Indoor Unit



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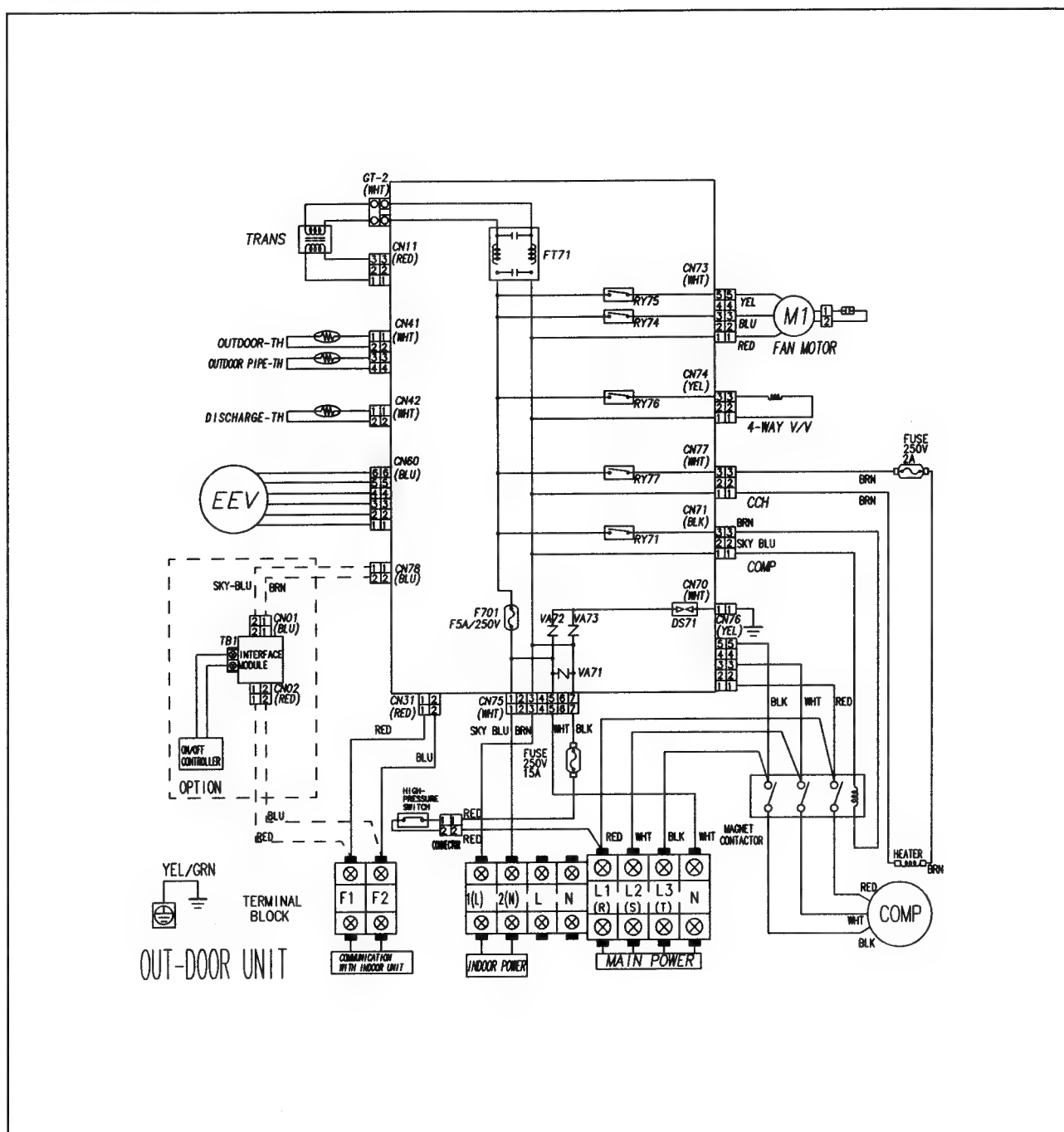
## 6-2 Outdoor Unit

### ■ UH070EZMC



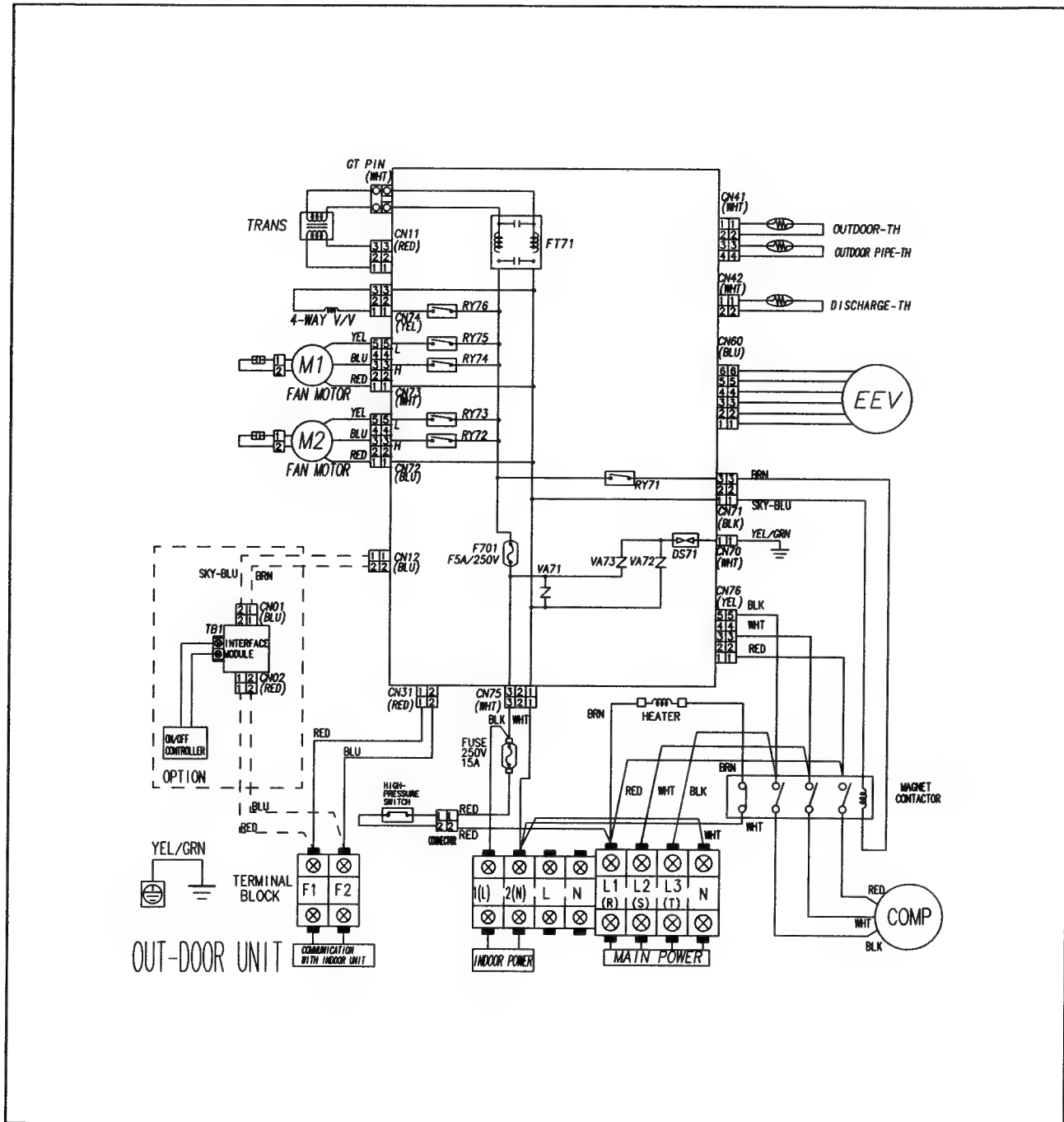
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## ■ UH105GZM



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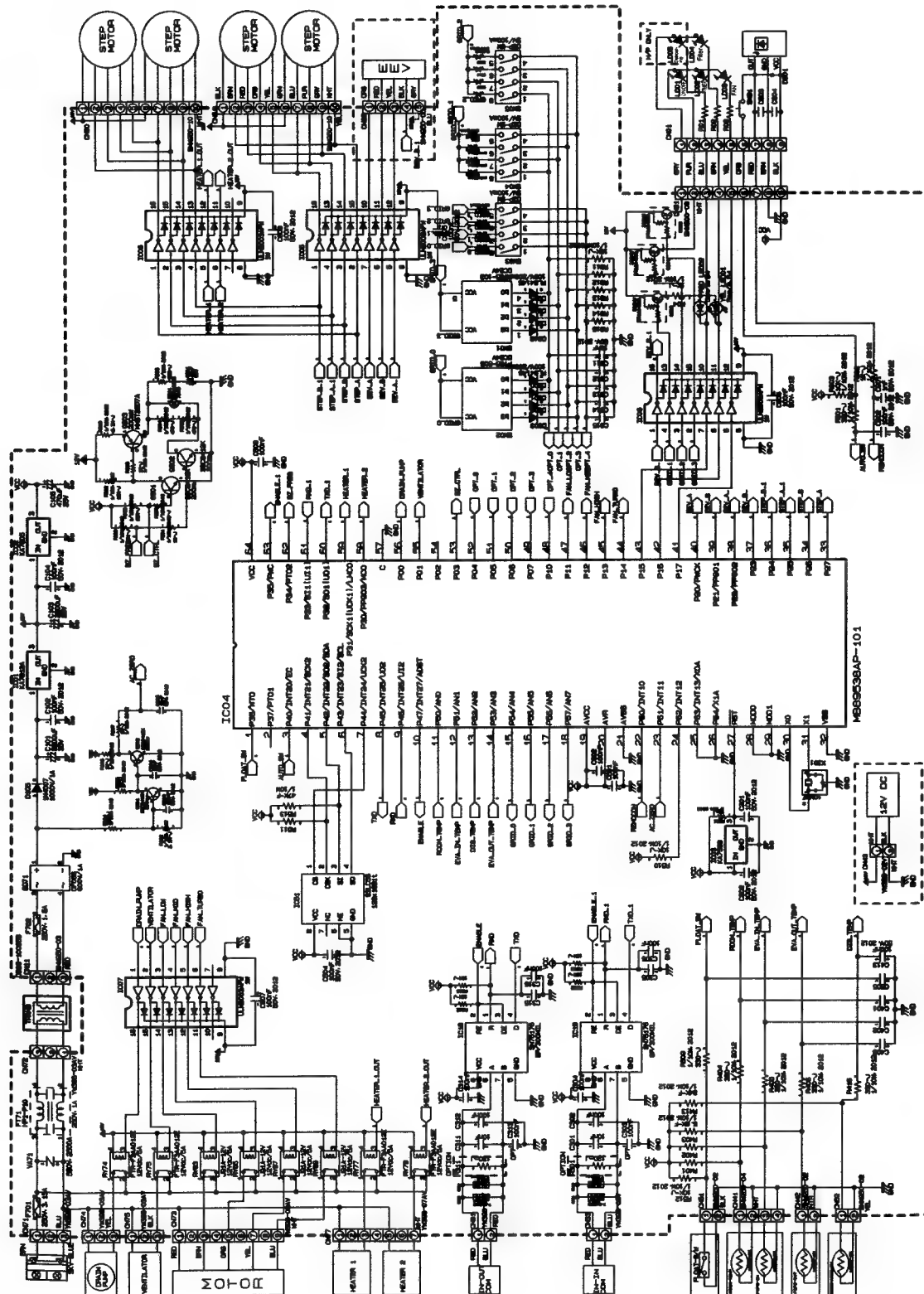
■ UH128GZM/UH140GZM



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## 7. Schematic Diagrams

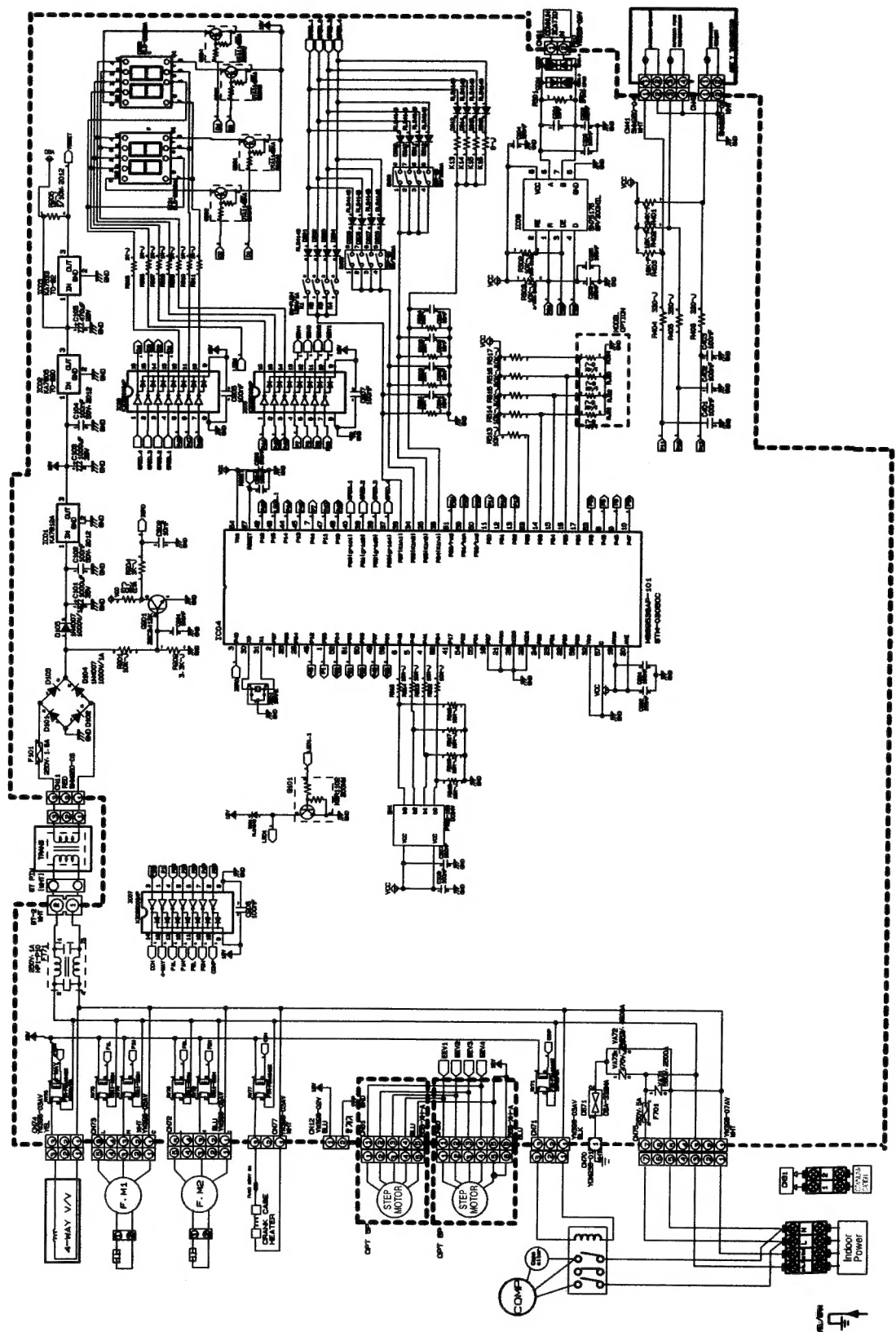
### 7-1 Indoor Unit



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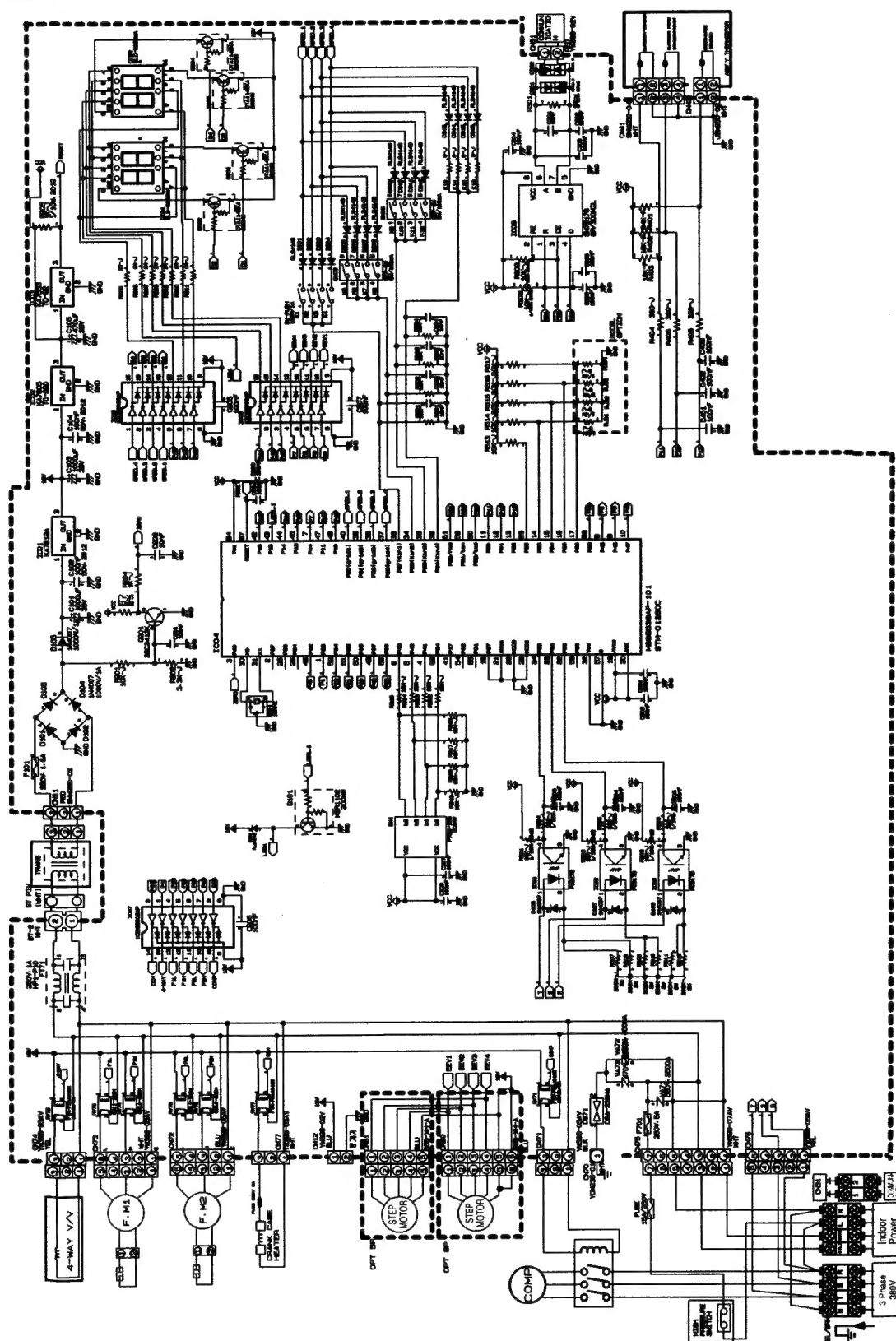
## 7-2 Outdoor Unit

### ■ UH070EZMC



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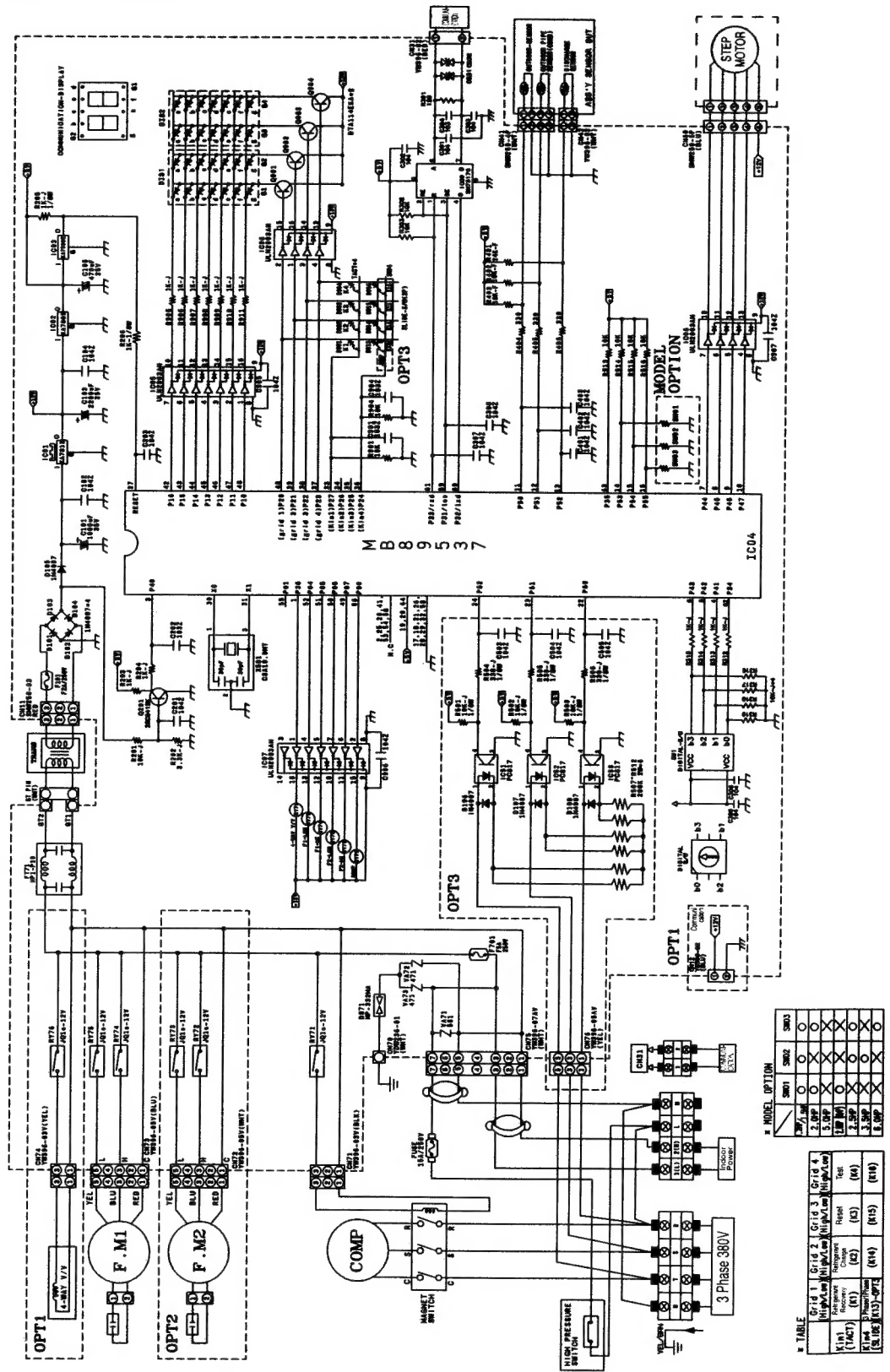
# ■ UH105GZM



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■ UH128GZM/UH140GZM



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